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PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—LOGIC, IN ITS RELATIONS TO MEDICAL SCIENCE: *An Address delivered before the Starling Medical College, at its third Annual Commencement.* By EDWARD THOMPSON, M.D., D.D., President of the Ohio Wesleyan University.

I should have promptly declined the invitation of your Faculty to deliver an address, at this commencement, but for the fact that I declined a similar invitation, from the same source, on last year. I should have done so, however, not from any unwillingness to gratify your excellent corps of instructors or to contribute my mite towards your annual collegiate festivities, but because my duties and my state of health deny me both the time and the elasticity necessary to prepare for so novel and choice an occasion. I make this statement, that you may neither ascribe the crudeness of my production to a want of respect for my hearers, nor my appearance before you to an insensibility to my own deficiences, but that you may be induced to give me an indulgent hearing, by considering that, in asking your attention, I oppress myself, to avoid the imputation of disobliging your professors.

I experienced no little embarrassment in the selection of a theme, and it was not until after much reflection, that I made up my mind to commend to your special attention the science of Logic. If the subject be deemed inappropriate, lay not the blame on your faculty, who did not select, or even suggest it. If it be deemed unwelcome, I trust you will pardon the speaker, when you learn, that he, having once belonged to your profession, and felt the want of the science to which he would attract your attention, would fain have you avoid some of the difficulties which he encountered.

My proposition will be sustained, by glancing at the nature of the science alluded to, and by showing, that medical men are not likely to acquire it, in their ordinary professional walks. We would not derogate from the merits of the profession; rather would we exalt it, and animate to its more assiduous cultivation.

Logic is *the* science and art of reasoning. I emphasize the article, because some regard logic as concerned with a *species*, of which reasoning is the *genus*; whereas, it is the *only* science and art of reasoning: he who reasons correctly, must reason *logically*. It is of no consequence to object, that many, who are versed in logic, reason poorly; for logic can neither supply premises, nor the intellectual power necessary to their skillful employment. It is equally vain to object, that many who know nothing of dialectics, nevertheless reason ably; for extraordinary mental power, together with competent information on any particular subject, will enable any one to reason well, on that subject. This does not prove logic to be of no consequence. An orator speaks, and nations are entranced: the critic analyzes the oration, and deduces from it the laws according to which it is composed — thus we have the science of rhetoric. A nation constructs a language: the grammarian ascertains its principles — thus we have the science of grammar. A dialectician reasons; his argument convinces all who understand it; the logician examines it, and finds the principle upon which it is built; he examines another and another, of similar power, until, after a sufficient induction, he concludes, that all rest upon the same principle; he develops, illustrates, and applies this principle, and thus gives us the science and art of reasoning.

Though practice may go before science, science may correct and improve practice. The rules of logic correspond to those of grammar and criticism, and they subserve these two important ends: they go far towards placing men of moderate abilities, upon a level, in respect of reasoning, with those of genius; and they enable all, who understand them, to ascertain when they have framed an argument that will stand the test "of scrutiny, of talents, and of time."

The remarks which follow have special reference to medical practitioners in the West. That we should be wanting in dialectics is not surprising: a large majority of us entered upon the study of our profession without having enjoyed the benefits of collegiate training—many, indeed, without even an academical education. We do not advert to this in a censorious spirit. The circumstances of our country have been such as to preclude all but a few of her youth from classical halls. Of these few, many have been allured by the temptations of a more lucrative profession, and others have been drawn to the duties of a more sacred one, leaving but a small residue for the healing art.

The youth who has never been trained to accurate reasoning, will not be likely to acquire it in *medical studies;* they are *historical*, rather than *scientific*. So far as they are historical, they are *natural*,

descriptive of being and phenomena only: so far as they are *scientific*, they are *practical*, rather than *speculative;* and so far as speculative, *natural*, not *mathematical* or *moral*. First, the student is conducted to the *skeleton*, whose dry bones never awaken his powers of reasoning, however much they may challenge his observation and exercise his memory. From the skeleton he goes to the *cadaver*, which, while it calls for discrimination and trains his hand to a dextrous use of the knife, only now and then, when it presents an incidental question concerning the merits of a certain discoverer, or advances to the related science of physiology, calls for a connected chain of thought—judgment. Next, he is led to the *laboratory*, where he is introduced, in regular order, to a set of elements and compounds, which are cognizable to sense, and to a series of beautiful truths illustrated by experiment, affording no room for doubt, and rarely inviting him to metaphysical research.

I am aware that *discoverers* in Chemistry, as in most other sciences, are metaphysicians, but *they* study analytically, while learners are taught synthetically; so that the student of chemistry who can best memorize, can best endure examination. Similar observations may be made with reference to Materia Medica, Botany, Zoology, and Mineralogy. When the student has mastered these sciences, he is generally hurried into private or hospital practice, to learn by observation the arts of Chirurgery and Therapeutics. If he prescribe in a few cases successfully, and acquire the use of the instruments employed in the more common operations of the surgeon, he enters with a good degree of confidence upon the responsibilities of practice. He adopts the routine of his instructors; he is as fortunate as his competitors; in *ordinary* cases he manages without embarrassment, and in *extraordinary* ones, he keeps within the rules of the books: upon the whole, he satisfies himself that he is leading a useful life. But what is he but an empiric? (I use the term in the *proper* sense;) he proceeds on rules and methods founded on practice and experience, not on any knowledge of natural causes. If he have either the low desire of advancing his own interests, or the high ambition of promoting those of mankind, he may ascend through physiology, etiology, and pathology, to the study of theoretical medicine, but here he will find the need of habits of reasoning; and if he have not previously formed them, or be not possessed of superior genius and indomitable perseverance, he will grow weary of his task and sink down to the low walks of the mere practitioner. There is nothing in the *collateral studies* of the profession to counteract this tendency. What are placed in this category belong to the natural sciences, such as geology, climatology, and medical topography.

Formerly, one, at least, of the ancient languages was deemed, if not a prerequisite to medical studies, a related acquirement; for medicine once had a general medium—the Latin. Now, in our country, at least, a knowledge of no other tongue than our vernacular is deemed needful for the medical student; indeed, the study of the beautiful *media* through which flowed the treasures of ancient Grecian and Roman mind, is generally depreciated. It is not my purpose to show how much we have lost by the decline of linguistic studies, else I might point out the benefits derived to the medical student from an acquaintance with the tongue in which the technical terms of his art are cast, in which its illustrious authors of former ages wrote, and which alone opens to him the mines of knowledge deposited in the works of Bœrhaave, Borelli, and similar ones, of ages antecedent to theirs. We might, also, show the importance of a permanent, general, transparent medium for the profession, by which the discoveries of one nation might soon be made the property of all. I simply point to the fact, that the study of language would, by training the mind to abstraction and enticing it to practice the delicate arts of a refined logic, resist the tendency to empiricism, if it did not allure to abstruse investigation.

He who is adventurous enough to cultivate medical science without logical habits, will find but little in *medical authors* to supply this deficiency. They are generally didactic rather than controversial, and when they present us with argumentation it rarely approaches the syllogistic form. As I am not prepared to compare the writers of different professions, I must speak interrogatively. Has Medicine any works which for argumentative ability can be compared with those of Blackstone, Kent, Story? or of Chillingworth, Warburton and Paley? The chief work of Paley, for example, will bear the strictest logical examination, each argument may be traced from the ultimate conclusion to the first premiss without evincing a fault; it may be represented by symbols, so that its conclusiveness shall appear without considering the meaning of the terms. The Divine Legation of Warburton opens with a series of arguments nearly syllogistic, and it is throughout replete with rigid reasoning. The principal work of Chillingworth is read by many arguists merely with a view to strengthen the reasoning faculty. Both Law and Divinity have works in course which train the mind to reason, and to which Medicine has nothing corresponding; such as books on the subject of "Evidence." How is it with *Medical Teachers?* (I know there are noble exceptions.) Is it not the tendency of the College to treat Medicine entirely as an experimental art? Again

and again we hear, ex cathedra, the exclamation, "Away with *principles*, give us *facts;* away with *causes*, give us *effects;* away with *theory*, let us have *practice.*" We need not say how much such exclamations degrade the science, how they sanction the popular fashion of estimating the physician by the number of his facts, and thrusting aside the scientific youth for the ignorant matron. I need not point out the fallacy which lurks beneath them, for you may readily perceive that a principle may embody a thousand facts, an antecedent may be worth more than a consequent, and practice, however *bad*, implies *some* theory. My purpose is to inquire whether it does not encourage idleness, and check the best tendencies and the highest aspirations of the pupil. The physician should *value* facts, should *collect* them, but he should also compare, abstract, generalize; nor should he lightly esteem the theory of a distinguished author merely because he has not himself witnessed the facts on which it rests—he might as well doubt that the earth revolves, because he has not scientifically demonstrated that truth. Nor should we fail to observe, that a man who confines himself to the beaten track may have a far more limited experience than the theorist who takes wide surveys, and marks cases in every variety of modification. Kindred to the disregard of theory is the contempt of hypothesis, for theory and hypothesis are not synonymous. Theory signifies a connected arrangement of facts according to their bearing on a law: hypothesis, an assumption, which is conceived to support a law: thus the connected facts which point to the law of gravitation is a theory; the supposition of a subtle fluid, which is presumed to explain these facts, is an hypothesis. An hypothesis, so far from being despised, should be valued according as it explains more or fewer of the circumstances of the phenomenon to which it is applied. If it explain all of them, it is highly probable, and may, after a time, acquire certainty; as for example, the hypothesis of Kepler, that the planets moved in elliptic orbits, which, though received with hesitancy at first, has so explained successive astronomical discoveries and computations as to take rank with established laws. Even when an hypothesis is not thus fortunate, it may, by suggesting experiments, intimating inventions, and animating to further researches, vastly increase our stock of knowledge and multiply the arts of a profession. What though an hypothesis be imaginary, is it *therefore* to be despised? Imagination is the handmaid of science; the most illustrious philosophers have honored her, and been allured onward in the path of discovery by her rainbows: if you doubt it, go learn of Archimedes, or listen to the eloquence of Bacon, or sit at the feet of Rush. Indeed,

imagination is the great conceiver and bold discoverer of new worlds, the Columbus of the human faculties; every *instantia crucis* is a call for her aid. Mark the beautiful series of experiments which led Sir Humphrey Davy to the invention of the Safety Lamp, and you see her going before. He first ascertains in what proportions the mixture of fire damp and atmospheric air is explosive: he next determines at what temperature the mixture detonates. It had long been known that if the explosive compound were passed through a tube, and set on fire, the flame would not pass back through the tube to cause explosion. The last point to be ascertained was, how short might be the tube consistent with safety: to determine this, he cuts off successively very narrow sections until he reduces it to a mere metallic ring, and he finds this sufficient to prevent explosion: finally, he ascertains that the flame of the mixture will not pass through wire gauze. He is now ready to construct the Safety Lamp.

I know that innumerable errors, and almost inextricable confusion, have resulted from a misapplication of the speculative understanding, but shall we, therefore, repress it? he who does so checks powers as original, as lawful, as useful as the senses themselves,— powers which it is as blasphemous to neglect, as it is wicked to abuse: powers on which social and scientific progress depend, and which, more than any other, ally man to the higher orders of being.

The *physician will find still less in the practice*, than in the *study* of medicine, to stimulate the reasoning power. Observation, diagnosis, prescription and prognosis, constitute the circle of his duties,—a circle through which he may pass by *rule*, as well as *reason*. When he meets his fellows in counsel, is he not accustomed to oppose *dictum* to *dictum*, *experience* to *experience*, rather than *argument* to *argument*? At the bed side and in the office, he is an autocrat. Should any one call in question his prescription, he has a right to say, "How dare you dispute my authority?" I do not say this is wrong, but unfortunate. The lawyer is compelled to be an arguist; whether acting as attorney, counsellor, or solicitor, he is called on to define words, compare laws, weigh evidence, analyze motives; in all things, he must abide the scrutiny of his peers: in the strong conflicts of the bar, where mind grapples with mind, where argument meets argument, thought leaps to thought, and witticism flashes to witticism; where all the resources of subtlety and acuteness, all the cavils of the critical and captious spirit, and all the energies of vigorous and enterprising intellect, have free scope, he must either prove himself a logician, or resign his place to one who can.

So it is with the minister: he must define, he must argue; persuasion is his business; this depends upon conviction, and conviction upon argument. In the church, he moves through armed ranks of errorists and heretics; in the world, he meets on all sides the desperate hosts of a depraved philosophy: in his most peaceful modes and attitudes, he must give a *reason* of the hope that is in him, and train up disciples fully *persuaded* in their own minds: even at the bed side of the sick, and the pillow of the dying, he must satisfy the cravings of human *reason*, as well as of human *affections*.

Do not understand me to say that physicians *may* not possess all the dialetical skill and mental energy of other men, but that their profession does not *demand* it of them.

But some one may inquire, "Are not doctors the most contentious of men?" In all civilized lands, the tocsin of a medical war is continually sounding — a war *bloodless* for the most part, though not always *bootless*—a war in which we see

> "Hypocrisy with smiling grace,
> And impudence with brazen face;
> Contention bold with iron lungs,
> And slander with her hundred tongues."

This war, however, is not because they have too *much* logic, but too *little;* had they more argumentation, they would have fewer disagreements; did they look each other in the eye, week by week, and state propositions, define terms, test arguments, methinks they would be more fraternal; they might still differ in theory, disagree in opinion, and vary in practice; they might occasionally be provoked by covetousness to contention, and by envy to strife; but their differences would not lead to such altercations, their disagreements to such disputes, their variances to such dissensions, and their contention and strife to such irritation and ill-blood, as to fix upon them the distinction of "*genus irritabile.*"

How is it with other professions? Ministers differ — they contend too — they often come to blows apostolic, not in the Hudibrastic, but in the literal sense; they burn each other, not in the old method, with piles of fagots, but piles of propositions; they surround each other with grammars, and lexicons, and polyglots, and after the battle, they shake hands, and find that, though they are *opponents* or *adversaries*, they are not *foes* — often they discover that they are brothers beloved. So with lawyers—they sometimes rush upon each other like tigers, and it would seem as though the Temple of Justice must be deluged with blood, but no sooner is the contest over, than they are harmless and

loving as lambs. As a house without a chimney, so is a body of men without discussion. The pulpit is the flue for the ministry, the bar for the law, but alas, where is the outlet for medical smoke?

I proceed to remark, that there is nothing *in the prevailing philosophy of the times*, to promote dialectics. We still feel the reaction from scholasticism. Of the schoolmen, it is customary to speak in terms of contempt — a feeling which we are apt to transfer from these misguided men to their favorite science. But what though their questions were often frivolous, their premises fanciful, and their aims unreasonable, shall logic be blamed? Nay, so far as they employed this science they were useful. To the vulgar, it may be allowed to sneer at such men as Roscellinus; but to the philosopher, it belongs to trace back the illumination which distinguishes France, Germany and England, in great measure to the adoption of the scholastic method, and to see in the substitution of stern reasoning for a blind acquiesence to authority, the beginning of that reformation which has given to enlightened nations religious freedom. But it is vain to reason with those who will not hear — we must suffer yet a while from the contempt of logic resulting from the misapplication of it by the schoolmen.

When these men had long wasted their energies in labors which, however invigorating to the mind, were necessarily barren of discovery, Lord Bacon arose—Bacon! a name associating peerless power, matchless eloquence and extensive knowledge, with unblushing bribery, base ingratitude, heartless treachery, parasitical flattery, and cold and selfish affections—Bacon! a philosopher, who in works erudite, profound, and radiant with original thought, enumerated the defects and omissions of his predecessors, classified the various branches of science, and pointed out their relation to the human faculties; who mapped out the region of *known* knowedge and pointed the way to the fields of *unknown;* who investigated the causes which vitiated and retarded science, and whose crowning achievement was that he recalled man to the study of nature—taught him to observe, experiment, infer; for this is the basis of the *Novum Organon Scientiarum*. Great as was his merit, he was perhaps overrated. Letters had been revived, printing invented, and the world aroused to freedom of discussion before he arose; still he is the father of modern philosophy, and it is the pride of scientific men to follow his footsteps and halt at his bidding. In doing so, however, they may debar themselves access to fruitful regions of truth, forego legitimate methods of research, and fall into errors which cripple the intellectual powers. The Baconian philosophy is very im-

perfect. Its whole circle of observation is external: it leads the mind out through the senses. The Baconians are like those who build their houses with windows opening only into the street, through which the mind is constantly attracted by the sights and sounds without; the Scholastics are like those who build abodes with windows opening only into interior courts, whence the light streams through halls paved with marble, crowned with garlands, sprinkled with perfumes and gushing with fountains, where the wearied dweller, shut out from the busy world, is refreshed, delighted and wrapped in contemplation. Each of these classes is in error—let us have windows both ways—there are facts psychological and facts sensible. Berkely describes one extreme when he says, "I have known a fiddler gravely teach that the soul was harmony, a geometrician very confident that it was extended, and a physician, who having pickled half a dozen embryos and dissected as many rats and frogs, grew conceited and affirmed that there was no soul at all, and that it was all a vulgar error." The same Berkely illustrates in his own philosophy the opposite extreme; for, looking too intently at the inner, he lost the outer world, and cried in substance—"Mind alone has essence—the forms of matter are but shadows."

Bacon's philosophy is sensual—it overlooks internal knowledge. Within the soul there is a solid world of principles—a world which eye hath not seen—a world which underlies the reason—it is composed of first truths—truths which it were madness to deny and folly to attempt to prove—such truths as these: matter and mind have uniform and fixed laws; qualities imply a substance. Without such principles, reason could not move a step. He who doubts the first of the propositions just stated, cannot complete the simplest process of induction. He who doubts the second, can have no knowledge of either mind or matter. Besides these principles, there rises and shines within the soul ideas which experience never could furnish—ideas based upon the succession, relations, and infinite of things—ideas necessary, absolute, eternal. There are also impulses which they awaken. Who feels not within his brain a reed that can measure earth and heaven, mysterious feet that leap in infinity, and fiery wings that, cutting the boundaries of time, soar behind the hour that saw the earth arise, and rush exulting beyond the day that shall see the heavens rolled together as a scroll.

There is a philosophy that devotes almost exclusive attention to principles and notions, independent of experience; it is the transcendental philosophy.

The Sensualists construct the edifice of human knowledge, as the

Aleutian Islanders do their dwellings, beneath the ground. The Transcendentalists build it upon an isolated peak above the clouds—their eyes are ever upward toward the pure and boundless serene, little heeding the lightning, the thunder and the bursting storm beneath their feet. There is a philosophy which like the city of Algiers, beginning on the plain, rises up the mountain's side to its very summit.

But it is not this imperfection itself of the Baconian philosophy, on which we would fix your attention, but a certain result of this imperfection. It confines our minds to experience: it does not cultivate abstraction—that power whose strength in any individual is usually the measure of his logical ability.

The Baconian philosophy, representing induction as the sole method in all branches of knowledge, banishes *deduction.*

Induction ascends from particulars to universals; deduction descends from universals to particulars. Induction leads up, fact after fact, until a general principle is established; deduction unfolds the assertions wrapt up in a general principle, and shows its various bearings. Induction discovers truth not formerly *possessed;* deduction discloses truth not formerly *perceived.* Induction requires caution and judgment; deduction requires logical skill. Induction is chiefly a process of investigation; deduction is throughout a process of strict reasoning. Induction *infers;* deduction *proves.* If this be a correct representation, you see not only the error of asserting that induction is the only scientific method, but how this error tends to repress and discredit dialectics.

The characteristic tendencies of the age are averse to the cultivation of the deductive intellect. We are eminently a *practical,* not a *speculative* people; so indeed were our ancestors. The Anglo-Saxons seem to have inherited the characteristics of Rome, as the Germans have those of Greece. The former aim to *do* what is to be *done,* as the latter to *think* what is to be *thought.* Our prevailing tendency is manifest, not only in our philosophy but our tastes, our habits, our pursuits. Ours is not the land of glorious epics, of metaphysical researches, of students for life. We are formed for activity—not contemplation. We tear up our forests before they can become classical. Should a poetical lover choose an elm to immortalize its shade, his muse would hardly be invoked before the echo of the woodman's axe would frighten her away. We have our "thoughts that breathe and words that burn;" but our breathing is through the steam-pipe, and our burning is by the furnace. We have our wire-drawn distinctions, but they are drawn over poles to distinguish turnpike roads. We have our *mirabiles amores,*

but they are all resolvable into the *sacra fames auri*. We are utilitarians, and we measure our achievements by the mason's square and weigh our gains in the scale avoirdupois. We do every thing in haste. Even divines and doctors, like boots and bridges, are made in a hurry. Our hurry has led us into an excessive division of labor, which, however favorable to the development of resources, is not so to the development of mind.

The old universities, where the faculties of law, medicine, and divinity sit side by side, as members of the same family, surrounded by their younger sisters, the liberal arts, promoting each other's edification, cherishing each other's affection, advancing each other's interests, and defending each other's honor, do not seem to suit us. We divorce the professions, and surround them with separate fortifications, to dwell in a sort of Chinese exclusiveness, or fire into each other's bastions. Instead of building to science a glorious temple, to be ascended by successive steps, we build a number of one story halls, so that a doctor, or lawyer, or divine, may learn his profession with no more preparation than a carpenter his trade. Not content with separating the professional faculties from the liberal arts, we often sunder the liberal arts themselves, and allow the student to elect his own studies, instead of directing him in that course which will bring out all his powers in fair proportions.

The tendencies to which I have adverted, afford so many arguments, from cause to effect, to show, that physicians are not likely to manifest those mental traits which are not cultivated by their profession, and, as the reasoning power is not of this description, that they may be expected to be deficient in this, unless they specially cultivate it, I proceed to strengthen the argument, by pointing out some of the consequences of this want of logic in the medical profession, and thus argue from effect to cause.

1. *Their discussions are often endless.* That doctors disagree, has passed into a proverb. But do not divines disagree, also? True; but their disagreement is rather *doctrinal* than *practical*. The disagreement of physicians is principally *practical*; and when theoretical, it is often in relation to points, concerning which it would appear that there certainly could be a definitive settlement. Such, for example, as whether medicines are ever absorbed, and taken into the general circulation. But, would logic tend to abridge these discussions? Certainly. It cuts short discussion, both by bringing parties to issue, and curing inconclusive reasoning.

The discussions of physicians are *numerous*. Logic would reduce them, because it indirectly prevents logomachy. It teaches us to scruti-

nize terms; to distinguish between the abstract and the concrete, the compatible and the opposite, the absolute and the relative, &c. It teaches us to distinguish between the whole essence, the partial essence, and that which is joined to the essence; between genus and differentia; between property and accident. It gives us the rules of division and definition, teaching the difference between the nominal and the real definition, the accidental and the essential, the physical and the metaphysical. He who considers how much controversy arises from ambiguous terms, and how much confusion from cross divisions, must see that logic would reduce the list of mooted medical questions. So, also, it would, by the exposure of fallacies. Are not Thomsonianism, hydropathy, homœopathy, &c., examples of hasty induction? Doubtless, steam, water, and sweetened water are valuable remedial agents, and, in many cases, each may be an adequate means of cure. We must beware, however, how we proceed from the particular to the universal. One of these systems *may* prove to be all that it assumes, but certainly, when we consider, that in medicine as in meteorology, a thousand circumstances unseen may vary the results of our experiments, and that, while successful cases are blazoned, unsuccessful ones are kept out of sight, that many reported cases are due to false statements, false perceptions, exaggerations, &c., we should beware how we assert that a sufficient number of facts has been accumulated to establish any of them. Judging from the past, we may conjecture that the fate of the first of these systems awaits the rest, and all others of similar simplicity.

The fallacy, called by logicians, *non causa pro causa*, is common among physicians. You take a certain drug, and you get well. This is all you know about it, but you say the medicine cured you. You now assume what you should prove, viz: that the medicine and the cure stand to each other in the relation of cause and effect. It may be that nature, or regimen, or imagination may have wrought the cure.

The word *experience* has led to many controversies. What I know by experience is certainly true. That this remedy will cure you I know by experience. Therefore, that this remedy will cure you is certainly true. The word experience, in the first of these premises, is used in the strict sense, and applies to the past. The same word, in the second premiss, is used in the popular sense, and applies to the future. It denotes, not experience, but a judgment founded on it. Nothing more reliable than experience, in the first sense — nothing more uncertain than experience, in the last. Instead of being *opposed* to speculation, it is *founded* on it. A man takes for his major premiss a certain opinion,

and for his minor a certain phenomenon, and combining them, he draws a conclusion of no more value than his premises. Hence, one man's experience is, that wet sheets *cure*, another's, that they *kill* — one's, that infinitesimal doses are efficient, another's, that they are inert. One's experience is, that a wounded artery should be tied — another's, that the blood flowing from its mouth may be stopped by a charm. One's experience is, that jaundice may be cured by calomel — another's, that nothing more is necessary than to hang up a bottle of yellow liquid in the chimney.

So with the phrase, common sense. As it is used in common parlance, nothing is more indefinite. Whatever stands to common sense, is to be relied on; but one man's common sense is very *un*common, another's, not so much so, &c. The common sense of the savage teaches that the sun goes round the earth — the common sense of the sage, that the earth goes round the sun. The common sense of European nobles says, that republics cannot stand — not so that of American democrats.

If such fallacies misled common people only, I should not notice them, but they often delude gifted, scientific, respectable men; sometimes even reputable members of the medical profession, who are thereby induced to forsake its ranks, and enlist under the banners of some charlatan. It may be said that such instances of professional desertion are owing, not to a want of that reasoning ability which distinguishes truth from error, but of that honor which prefers poverty in uprightness, to wealth acquired by dishonest artifice. I have too much confidence, however, in human nature, to accept this as a sufficient account of the matter.

2. Another result of the want of logical skill, is the *slow progress of medical science.* Other professions make but slow advances, but they do not admit of *such* improvement as medicine. Theology and law admit of no discovery—their great principles are settled. We cannot correct the Bible, or amend the precepts of morality; but medical science may be progressive, especially in our own country, where we have peculiar facilities to trace the influence of race, climate, civilization, &c., in modifying the forms of disease, and to explore unknown regions, whose forests or whose mountains may contain remedies, for diseases which have hitherto baffled the healing art.

True, the history of medicine is full of discouragement; but it is consoling to reflect, that scarce any system has been devised which has not led to some new truth, or proposed some useful curative agents. The Dogmatics, the Galenics, the Empirics, the Methodics, the Stahlians, the

Paracelsians, have appeared and disappeared, but each of these sects has contributed something to the stores of medical knowledge and the resources of medical art. May it not be so, too, with the modern systems? —they are tributaries, soon to be lost in the general stream of medical truth, but not until they have contributed to swell its waters.

If a medical student survey the mass of error, absurdity, and superstition which has been accumulated by the profession in the successive ages of the past, he may find himself growing skeptical as to his favorite science; but let him inquire, if there be not mingled with this mass materials of undoubted value, and he will find his faith revive—for he knows that the blood does circulate, that vaccination is, upon the whole, a prophylactic, &c.

When we examine the statistics of hospitals and the general records of mortality, we may be induced to suppose that there is about the same proportion of deaths and recoveries under every system of medical practice; but when we inquire, whether there has been no improvement in the treatment of small pox since the days of Sydenham—whether quinine is not useful in ague, and iodine in scrofula, we must see that medical science has advanced.

It is as true of every other kindred science as of medicine, that its progress is slow. Man is in haste, but God will have him "hasten slowly." Plato represents the human mind, in its progress to perfection, as the driver of a winged chariot; but the wings often droop, and periodically moult; the horses are unequal—one fleet, obedient, and spirited; the other sluggish, clumsy, and mulish: but, notwithstanding the successive elevations and depressions of the chariot, as the wings lose or regain their feathers, and the struggles of the horses, sometimes pulling opposite ways, and at best moving with unequal footsteps, the driver gradually ascends the skies. So with medical science. But the progress would be more rapid, if physicians of different views were to meet together, and, in the love of truth, compare notes, and mutually examine arguments, surrender errors, and exchange truths.

Lastly, I mention as a result of the want of logic, the skepticism of medical men in regard to religion. Although some of the brightest ornaments of the profession, both east and west, are humble Christians, yet, that our physicians generally are inclined to unbelief, is very obvious. I could introduce testimony, if it were necessary. Dr. Logan, of New Orleans, in an address on the Ethics of Medicine, delivered in 1844, before the Medico-Chirurgical Society of Louisiana, says:—"I am especially urged to this theme, at such a time and place, from the

lamentable fact that, notwithstanding there are many practitioners in our country eminent for talents, illustrious for learning, and distinguished for skill; yet I have reason to apprehend, too many are numbered among our ranks who, by their reckless disregard and defiance of morals and religion, are ruining our influence and bringing discredit upon the whole profession." Other testimony, to the same purport, might be introduced. Now the cause of this state of things is not simple: it is owing, *partly*, to the pride of science, the neglect of worship, and the absorbing nature of medical duties; but *chiefly*, I think, to the want of logical habits.

The medical student, as one remarks, is too often taught to bring his gift, like the Athenian, to an unknown God. And why so? because medical authors are not wont to distinguish between causes and design. You survey a complicated machinery — you trace its movements from spindle to spindle, and wheel to wheel, until you find the first moving cause — a stream of water. But the question should arise, Who made all these wheels, and spindles, and frames, and so arranged them as to make the unconscious water work out with unerring certainty the wonderful result? The *design* is as apparent as the *product*, and the former as much implies *intelligence*, as the latter does *momentum*.

The pupil often thinks he can account for everything in the natural world, by natural laws; and in the animal world, by vital laws; and in the intellectual world, by psychological laws — but when he does so, he confounds two things entirely different, viz: power and law — law can *do* nothing; the term as used in science, merely denotes the mode in which a *power* acts, or the order in which its effects appear. In the cloud which is raised around the term law, the student often loses sight of God; he sometimes contrives to keep his soul out of view by a similar delusion, a delusion which some medical authors ingeniously promote. Bichat thus speaks of life: — "The functions of the animal form two distinct classes: one of these consists of an habitual succession of assimilation and concretion. By the other he perceives surrounding objects; reflects on his sensations; performs voluntary motions under their influence, and generally communicates by the voice, his pleasures or his pains, his desires or his fears. The assembled functions of the latter class form the animal life."

Now ask the great physiologist, what is the cause of perception, reflection, volition? Why animal life, to be sure. Very well. Now what is animal life? Why it is perception, sensation, reflection, volition, speech, &c. If this is not the vicious circle, pray tell what is?

But it has been copied and imitated, by the highest medical authorities, not only in France, but on the other side of the British Channel and on this side the Atlantic Ocean. Having put God and the soul out of sight, what wonder if the physician should neglect the Bible and its evidences?

Dr. Drake, than whom, a higher authority can scarce be quoted, alluding to the sources of skepticism among physicians, says: "We are constrained to express the belief, that ignorance of the Bible is a greater cause of skepticism, than the whole of them." Again: speaking of the evidences of Revelation, he holds this language: "If a revelation be possible, and the conclusion seems inevitable, it could not become known unless it received attention, were read, and the evidences of its reality examined. But this is precisely what the majority of our profession have not done. Their infidelity is most unphilosophical, because they have concluded without examination, in violation of critical justice; for they have condemned without a hearing. If their disbelief should be correct in the absolute, it is not logically correct, because not the result of careful and candid investigation. To such an investigation I would call them. As scholars and philosophers, they should be ashamed of its omission; ashamed that they have concluded before they have collected and compared the testimony, absolutely necessary to a correct decision; before they have subjected all the facts to the test of that logic on which they rely for the establishment of professional truth. When they have done this, should they not acquire a Christian faith, they will at least substitute a philosophical infidelity for the skepticism of ignorance. Into that cheerless region, we should not have occasion to follow many of them, for its inhabitants are few, indeed, compared with those who wander in the benighted land of ignorance and doubt. We have seldom met with a single physician, who had earned citizenship in that frozen zone; while the number of the latter, although reduced from what it once was, is still sufficient to show, that multitudes repudiate the Bible without having studied its doctrines, or the evidences of its heavenly origin."

Upon this eloquent passage we beg to inquire whether the reluctance to examine the evidence is not owing, in some measure, to the fact that the minds of physicians, confined almost exclusively to induction and analogy, are disinclined to moral reasoning. Do not imagine, because I have thus spoken, that I deem the medical profession particularly vulnerable; others, perhaps, err as much by neglecting the inductive process, as physicians by neglecting the deductive. Think not, because

I have alluded to the skeptical tendencies of Medicine, that I seek to place a stigma upon it in the eyes of good men. It is a profession which for genius, learning and humanity; for industry, experiment, and persevering, self-denying and perilous researches; for a patient submission to peevishness, a generous sacrifice of pleasure, ease, and even devotion to the calls of duty, and a manly forgiveness of the basest selfishness and ingratitude, is wholly unsurpassed. To Medicine, I owe an unspeakable debt. Whenever I have eaten the bread of sorrow, or drunk the cup of affliction, she has been my Good Samaritan; she has calmed my anxieties, mitigated my pains, awakened my hopes, and often counted my pulse, and cooled my tongue at the midnight as well as the morning watch; and when, with tears, I have offered remuneration, she has gently replaced my slender purse beneath my pillow. To her skill—a skill which I ascribe to Divine wisdom and mercy, I owe the prolongation of my life. The more I see her value, the more profoundly do I regret that powers so commanding, and generosity so noble, should so rarely be found in union with religious faith.

ART. II.—*On the Pathology of the Blood.* By H. L. THRALL, M.D.

Blood is the medium by which nutriment is supplied to all parts of the body. It is the seat of those chemico-vital changes, which prepare lifeless matter for becoming living components of the organism; and for participating in the acts, of which muscles and glands are the seats and instruments. In it those vital metamorphoses occur, by which the components of air and earth, become constituents of brain and nerve, and minister to the reciprocal excitations of mind and matter. In it the worn out tissues are subjected to chemical transformations preparatory to their exit from the body as carbonic acid, urea, &c. While, then, it is the source of the assimilated, vitalized matter, subservient to nutrition of the body, being literally "the life thereof," it is the common sewer into which the debris—the products of waste of tissue—is received, being the great thoroughfare in which passengers to and from the body pass and repass, to gain access to their transient vital abodes, as cell and fibre, and from these to the organs of excretion, to be restored to the inorganic world. This constitutes the larger, healthy, or systemic circle of albuminous aliment. It includes the journey from the duodenum to the tissues, during which the changes of vitalization and *primary* assimilation occur. During this process soluble albumen becomes spontaneously coagulable, organizable fibrine, without change of chemical composi-

tion. In the adult, as much effete, nitrogenized substance, leaves the tissues to re-enter the circulation, as is added by nutrition. The quantity added by the nutritive process, is in a direct ratio with disintegration and re-absorption.

A second digestion or solution of the waste portions, is a preliminary to absorption into the vascular system. It makes room for the new substance. As gastric digestion renders albuminous aliment soluble as a necessary antecedent to absorption by the lacteals, so is a second digestion or solution of the decaying solid organism, an essential condition to re-entering the circulation. This by Prout,* Bird, and others, is called secondary digestion. As in the act of solution the sameness of chemical composition is lost, also as the act of disintegration and solution is destructive to the organism, it is by the same writers called destructive digestion.

Interstitial death and decay are as incessantly active during adult animal life, as is interstitial reparation; and we as constantly find in the blood, substances which are the products of the unceasing decomposition of the nutritive fluids, and of the solid textures, as we do of assimilated fibrine for the reparation of interstitial waste. A few of the most important of such substances are urea, uric acid, kreatine, kreatinine, and carbonic acid.

The worn out tissues on re-entering the blood are not excreted as simply dissolved dead tissue: their elements are re-arranged, and subjected to a series of chemical metamorphoses, in the circulation;† by which the highly complex compounds, of waste of nerve and muscle, are reduced to a great number of more simple substances. In these changes, inspired atmospheric oxygen takes an active part, and is incessantly combining with the excess of carbon and hydrogen, to the production of carbonic acid and water. In this manner the nitrogen, with a smaller proportion of carbon and hydrogen, is finally reduced to more simple states of combination, adapted to the selective action of the kidneys, by which it is separated as the well known products of urinary excretion. The carbon in the meantime, as carbonic acid, finds its way to the lungs, and other portions of it to the skin, as carbonic, lactic, acetic, and butyric, acids. From the moment the disorganized tissues enter the blood, the transformations and re-arrangements constantly approximate the compounds to greater

* Prout on Stomach and Renal Diseases, 4th edition, page 374. Bence Jones' Lectures on Animal Chemistry, London Lancet, June, 1850. Prof. Bennet, in Braithwaite, No. 21, page 23. Prof. Walsh, do., No. 20, page 96.

† Bird on Urinary Deposits, 3d ed. §29–32. Bence Jones, Braithwaite, No. 22, p. 185, London Lancet, Sept. 1850, p. 246.

resemblance to the products of excretion, which being finally attained, they are adapted to the elective powers of the organs by which they are separated. This process is called secondary, or destructive assimilation, in contrast with primary assimilation, which is formative and the preliminary of nutrition, as this is of excretion.* One process is vitalizing and organizing, the other is devitalizing, disorganizing, and decomposing.

Functional activity of nervo-muscular tissues is, in its essential nature, destructive, and its conditions involve the re-conversion of organized tissue into the inorganic state. Provision for the maintenance of the purity of the nutritive fluids, is found in the removal of effete matters by excretion; which is as imperious and urgent a necessity of animal life, as is the regular supply of nutriment. If the vital fluids are not constantly purified by the separation and excretion of whatever is superfluous and injurious, the vital forces as certainly fail, as they do by respiring repeatedly the same portion of confined air.

Primary or nutritive assimilation is a vitalizing process, and does not alter the chemical composition of albuminous substances. When more albuminous nutriment is taken and absorbed, than is appropriated by the formative operations, in the reparation of interstitial waste, the excess is subjected to the process of destructive assimilation and excretion without becoming components of the tissues. This constitutes the smaller, less healthy circle of nitrogenized aliment. One division of destructive assimilation, includes the reduction of lifeless waste of tissue to compounds fitted for excretion; the other, the reduction of excess of aliment to similar compounds. "If on the one hand the products of waste be retained, they act in the manner of poisons; being as injurious to the welfare of the body, as the most deleterious substances introduced from without. On the other hand, if they be duly carried off, but not replaced, the conditions essential to vital action are not fulfilled, and death of the whole must be the result."† The products of disintegration are so numerous and varied, that several distinct modes are devised for getting rid of them. The excretory apparatus is consequently complex, so as to be in equilibrio with the digestive and assimilating. The conditions of health require

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* Bird on Urinary Deposits, 3d ed. R. B. Todd, in Braithwaite, No. 21, p. 371; No 13, page 113.

† Carp enter's General and Comparative Physiology, 3d ed. §46.

an equilibrium between nutrition and disintegration, between interstitial disintegration and destructive assimilation; and finally, between this last process and the reception of oxygen from without.*

The red and white corpuscles or cells of the blood, although isolated and floating, are endowed with life, and are organs or instruments, fitted for acts as special, as those of the eye or ear. They are essential to the many processes continually occurring in the blood, and are no less liable to disease than other living organs. They are essential to nutritive assimilation, and assist in introducing oxygen, so essential to the destructive process, and to the functional activity of brain and muscle. They are involved in all changes of the blood that affect other living organs. The blood is the seat and medium of so many and of such complicated processes, that we should, *a priori*, infer its liability to derangement, and the vital importance of its disorders.

We propose to ask the attention of the reader to the morbid states of the blood produced by the metamorphoses of the worn out tissues, of excess of aliment, and of the products of primary and secondary mal-assimilation, in connection with defective elimination. As our remarks refer more especially to the chemical transformations of devitalized waste of tissue, and of excess of aliment, both of which are decomposing products of albuminous substances, it may assist our inquiry to recall some of the chemical tendencies manifested by them while in the state of transformation. When, in the laboratory of the chemist, albumen, or any of the so called protenaceous group of substances, are warmed in alkaline solutions, they break up into a large number of less complex bodies, possessing chemically neutral or basic properties, as protid, erythroprotid, leucine, ammonia, &c. But when warmed in dilute acid solutions, and with oxidating agents, the products are acid; among which are the acetic, lactic, butyric, benzoic, and formic acids, and several others.†

This illustrates the diversity of products, evolved from the same chemical substance, by a change of conditions no greater than is incident to disease. If neither acids nor alkalies are present, the transformation is putrefactive. By varying the strength of the acid or alkaline solution, there is corresponding diversity in the prod uct

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* See Bence Jones, in London Lancet, Sept. 1850, pp. 247-249.

† See Garrod's Lectures on the Chemistry of Pathology and Therapeutics, London Lancet, July, 1849, page 8.

When the waste of devitalized nitrogenized tissue passes by absorption into the blood at a temperature of 98° Farenheit, transformation is regulated by the alkaline blood, and by the chemical agency of inspired oxygen. The muscles consist of fibrine and some salts. The fibrine consists of carbon, hydrogen, nitrogen, oxygen, sulphur, and phosphorus. The last products of the waste of muscle in the body, consist of carbonic acid, carbonate of ammonia, urea, water, phosphates and sulphates. The intervening products which float in the blood, are, says Bence Jones, "almost innumerable, as kreatine, kreatinine, inosinic acid, lactic acid, acetic acid, choleic acid or bilin, uric acid," &c., &c. The tendency of non-vital albuminous matter, whether in the animal body or in the laboratory of the chemist, is to chemical transformation into more simple compounds. The products are numerous and vary with each change of conditions as to a more or less alkaline or acid medium, or with the quantity of oxygen admitted. Many compounds thought to be solely due to vital chemistry, have been obtained in the laboratory of the chemist, by varying the conditions of albuminous decomposition. Each disease of the long catalogue to which the human system is liable, changes to a greater or less extent the conditions of the process of destructive assimilation; and the products are correspondingly varied in quality, quantity and number. When no urea is eliminated from the blood, the animal dies sooner than from any dose of arsenic or corrosive sublimate. This shows us the highly poisonous properties of the products of waste, when unduly retained in the blood. They float in contact with the living blood-cells—with the vitalized fibrine—the nervous and muscular fibres, and with the membranous and glandular organs.

The facility with which the blood is changed, may be seen in the effect of a free secretion of gastric juice. During digestion, various acids are separated from the blood, to form gastric juice; "for each equivalent of acid passing into the stomach, an equivalent of alkali is set free in the blood," which, as digestion progresses, becomes more highly alkaline. The kidneys are excited, and separating the excess of soda from the blood, lessens the acidity of the urine, or even gives it an alkaline re-action. "When digestion is completed, the gastric acids are re-absorbed with the food, and the alkalescence of the blood is altered in the opposite direction."* It

* See Jones' Lectures in London Lancet, May, 1850, pp. 415 and 416, and June, 1850, pp. 545 and 546.

is now less alkaline, and the kidneys being excited to preserve the normal alkalinity, remove an excess of acids; the acidity of the urine consequently increases up to the period of the next meal; when the same round of changes occurs in the same order. There are daily and hourly oscillations of the alkalescence of the blood, and of acidity of the urine, depending upon the state of the stomach.

"In irritative dyspepsia with pyrosis, a large excess of free acid is generated in the stomach, and being absorbed, finds its way to the kidneys, setting uric acid free from any soluble urate that may be present."*

The chemical and vital functions are thus intimately associated in the animal economy; and the pathological views which do not embrace this connection, are not in accordance with nature. "The blood has been called an internal atmosphere; and in its constant momentary variations, in its unceasing change, it may well be compared to the atmosphere. Each moment its composition as a whole is changing. Each respiration produces its change on the blood. Each time food is taken, a great change in it must occur. Each action of a muscle, or of nutrition of any part of the body, must take something from the blood and thus change its composition." Each disorganized effete particle of old tissue, by re-absorption, adds something to perpetuate the change.† "So, also, each excretion must effect its peculiar changes on that blood out of which it is taken." Torpor, or arrest of any excretion, must lead to serious change of composition in the blood. Its aqueous part is always changing. Its nitrogenized and unnitrogenized components are always varying in amount. The salts and alkalescence of the blood are in unceasing oscillation, above and below the normal mean. At no two hours of the day are they the same, even in health. These are the broad outlines of the causes of the physiological changes of the blood.

In disease, the momentary mutations are still greater; the oscillations no longer play about the normal mean, and profound *qualitative* changes occur.

"A person in apparently good health, experiences from exposure,

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* Golding Bird on Urinary Deposits, §143.

† Jones' Lectures in London Lancet, June, 1850, page 539.

a slight check to perspiration, and the next time he empties his bladder, he voids urine of a deeper color than is usual with him; and on cooling it becomes turbid from the precipitation of urate of ammonia."* Suppression of cutaneous excretion closes the outlet to several acids, as the acetic, lactic, butyric and carbonic.

Aeration by the skin is lessened, and between one and two hundred grains of animal matter, rich in nitrogen, and eighty or ninety grains of saline compounds, have their usual excretory channels obstructed. A superabundance of water, acids, salts, and effete animal matters, are retained in the blood. Pulmonary aeration is excited by the excess of retained carbonic acid, and to supplement defective aeration by the skin. The excess of retained animal matter is ultimately metamorphosed and separated by the kidneys, as urea, uric acid, kreatine, kreatinine, &c.; thus increasing the substances rich in nitrogen, passed by the urine. The suppressed cutaneous salts also find outlet by the kidneys, adding to the density and irritating properties of the urine. The various acids find their way to the kidneys, increasing its acidity, precipitating uric acid, and irritating the kidneys and bladder. But the kidneys often participate in the cutaneous torpor, or, by excess of irritation, pass into active hyperæmia, with impairment of their excretory functions. The blood is loaded with the partially suppressed cutaneous and renal excretions, which by the circulation come in contact with the living blood cells—the nervous centres—with every fibre, nervous and muscular—with the glandular and membranous tissues. General febrile disturbance ensues, but local predisposition, or the varying properies of the retained irritants determines this or that organ, to take on irritation or inflammation. The pulmonary organs are involved at one time, the serous membranes at another. In others, the fibrous, synovial, or glandular structures are implicated. Or again, the liver and intestines are excited to diarrhœa and expel the poisons.

Such are the effects of what is popularly called "taking cold;" in which, if I mistake not, too much is attributed to the recoil of blood to the interior, and too little to the irritants with which suppression of excretion loads the blood. It is true, that recoil of blood from the surface, with congestion of the capillaries of the interior, may alone

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* Bird on Urinary Deposits, §132–135.

excite violent viscereal irritation, independent of qualitative changes in the blood; but in many cases of "taking cold" the vascularity of the surface is scarcely lessened, and the effects are fairly attributable to suppression of excretion of acid, saline, and nitrogenized matters lessening the normal alkalinity of the blood, and irritating the blood cells, the sanguiferous and nervous systems, and other tissues. I am convinced that we have limited our views of disease too much to the effects of hyperæmia and congestion. I am no less convinced that we have attached too little importance to qualitative changes of the circulating fluids. A large proportion of the products of the excretions exist ready formed in the blood. If we bear in mind that in the adult as much matter is subjected to the destructive process as is absorbed from the alimentary canal, we must be convinced of the large quantity of effete products which daily pass through the circulation.

But, in health, the unceasing activity of elimination effectually prevents the presence of more than a very small quantity at any moment of time. Each excretory organ separates its appropriate products as fast as formed; being constantly active in maintaining one of the essential conditions of life.

Arrest of excretion by the kidneys, liver, skin or lungs, induces *immediate* poisonous accumulation in the blood.

Partial failure of pulmonary elimination is promptly followed by anxious dyspnœa, poisoned blood, encephalic and muscular depression, failure of the functions generally, and arrest of blood in the pulmonary capillaries. *Entire* suspension of aeration causes death in 2 or 3 minutes; not from want of oxygen alone; retained carbonic acid is one of the most virulent and quickly fatal poisons.

We hardly think it possible, says Prout, for life to continue beyond a few minutes, if no *urea* is separated from the blood by the kidneys or other organs. The brain rapidly manifests the effects of fatal poisoning from this cause. A mere *deficiency* of the urea-excreting functions gives rise to less fatal effects, and "to various anomalous symptoms which often puzzle and perplex the practitioner."

Among these are the innumerable derangements of the nervous system. The red globules are poisoned, the blood-making powers depressed, and anæmia, with general dyscrasia of the fluids and perverted nutrition, with all their consequences, most surely follow. It is asserted by Carpenter, "that biliary matter does not exist as such

in the blood, previously to the formation of the secretion, but that its elements, derived from the disintegration of the tissues, are present in the circulating fluids in some more pernicious form, and are transformed into biline by the agency of the liver, in order that they may be re-absorbed in a less noxious form, to be finally eliminated by the respiratory process. It is certain that the effects of the *re-absorption* of bile into the blood, as seen in ordinary cases of jaundice dependent on obstruction of the biliary ducts, are not nearly so injurious as are those of the *retention* of the elements of the secretion, consequent upon deficiency of the secreting power of the liver; for whilst in the latter case death speedily supervenes, if no other outlet be found for the excrementitious matters, in the former no severe injury necessarily arises from the accumulation of biliary matter, to even such an extent that the tissues in general are tinged by it."* "There is strong reason to believe that the re-absorption of biliary matter into the circulating current is the means by which it is finally carried out of the system." Re-absorbed bile is probably injurious only from the small quantity of biliary resin, coloring matter, cholestrine, &c., which are truly excrementitious, and are not, like biline, destined to re-enter the circulation. But biline, by far the most abundant component of bile, is re-absorbed as an essential element of respiration, and for the maintenance of temperature. It is moreover one of the series of intermediate compounds formed in the process of destructive assimilation. If this link fails, all subsequent parts of the process are deranged.

The functions of the liver in the animal economy may be compared to those of vegetation in the economy of nature, in purifying the atmosphere of carbonic acid, miasmatic and other hurtful exhalations; which being separated by plants, are not only deprived of their virulence, but are converted into useful products, re-appearing as the delightful flower, the luscious fruit, or as wholesome aliment. As the aeriform food of plants is made up of the poisonous constituents of the atmosphere, and the functions of vegetation are essential conditions of the removal of these poisons from the vital air, so it is with the elements of bile in the blood; they must be removed from the more vital constituents, and re-appear as biline, to subserve ulterior and highly important purposes. If these views are correct, the fatality of cholera, c. morbus, and other diseases attended with total

* Carpenter's General and Comparative Physiology, 3d Edition, § 591.

failure of the secreting power of the liver, is largely due to retained poisonous compounds, which, if formed into biline, would part with their deleterious properties. Chronic hepatic torpor then deranges duodenal digestion and the peristaltic action of the intestines on the one hand; and on the other, we have slow poisoning of the blood from the retained elements of bile. The latter are probably no less important than the former.—The distinctive vital properties of each organ are possessed in virtue of the specific peculiarity connected with the mode of nutrition; and the maintenance of the integrity of composition and textural sameness is one of the essential conditions of health. Of the numerous matters retained in the circulating fluids from chronic torpor of the excreting apparatus, some are irritating, others are depressing, but all are perverting. As the important office of primary assimilation, in preparing the pabulum for the repair of each organ, is performed in the blood, derangement of this function is an early and constant effect of retained excrementitious matters. Fibrine is imperfectly vitalized, depraved in quality, and ill adapted to sustain nutrition. The vital acts are then impaired from depravation or failure of the formative process, in the parts which are the seats and instruments of these functions.

Again, the essential conditions for the free transmission of blood through the capillaries, are the energetic performance of the nutritive, secretory, chemical and other changes to which the blood is subservient. The presence, in undue quantity, of the products of waste, impairs the aptitude of the blood to sustain these changes.* More or less perfect arrest of capillary transmission follows, leading to turgescence, congestions, active determinations, inflammations, active dropsies, &c.

The following classification of morbid states of the blood, by Garrod,† is preferable to any with which I am acquainted:

Class 1st. "Blood in which the constituents essential to the nutrition of the body are either increased, diminished or perverted; or in which some are increased and others diminished, and where no other constant alteration has been shown to exist."

Class 2d. "Blood in which those matters formed by the metamorphosis of the tissues during the performance of the vital functions, or produced during digestion and nutrition, and which are destined for speedy elimination, become increased in amount, and hence give rise to various morbid symptoms."

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* See Braithwaite's Retrospect, No. 22, Page 178—182.
† London Lancet, Oct. 1848, Page 270.

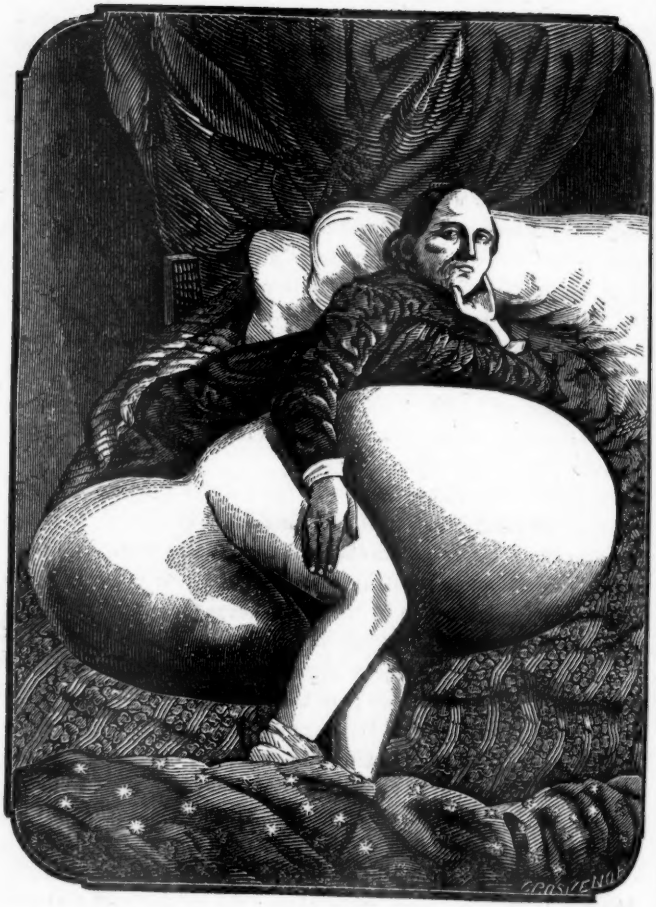
Class 3d. "Blood in which there exists matters abnormal to its healthy constitution."

"Each of these three classes admit of many subdivisions." Class 1st embraces excess, deficiency and perversion of fibrine, red globules, albumen, fatty matters, and of the saline constituents. It includes the abnormal changes of primary or nutritive assimilation, induced in the albuminous, oleaginous, farinaceous and saline components of the food. Class 3d embraces the effects of pus in the blood, the poison of dissection wounds, the bite and sting of venomous animals, the poisons of malignant pustule, the syphilitic, and various others which gain access to and pervert the fluids.

We shall confine our remarks chiefly to the 2d class, which includes the pathological states and products of the destructive processes, whether involving decompositions of excess of aliment, or of solid textures. All, or nearly all, of this group of substances are found in healthy blood. They are destined to speedy separation by the various depurating organs, whose office it is incessantly to free the blood of them as fast as they are received into or generated in it. Among the substances present in the healthy fluids, are carbonic, lactic, acetic, butyric, hippuric, inosinic, uric and other acids; urea, kreatine, kreatinine, the fatty acids, sugar, &c., &c.

By far the most common cause of the hurtful increase of these matters in the blood is defective excretion. But other and far different causes of excessive accumulation exist. Thus sugar is a component of normal blood; but its transformation into other products fitted for speedy elimination by the lungs, keeps the quantity present within healthy limits. Digestion of farinaceous substances may be arrested at the saccharine stage, a large excess of sugar being supplied to the blood. Or again, there may be failure of the process in the blood, by which the sugar is transformed into compounds suited to combination with oxygen, and after elimination by the lungs. Carnivorous animals have sugar in their milk; and other facts show us that it may be formed by diseased transformations of albuminous substances. Whatever may be the cause of the excessive quantity in the blood, the escape by the kidneys is salutary, preventing fatal accumulation. The same is true in many other cases; the products of transformation may be greatly increased in quantity or altered in quality, and impair the chemical, physical and vital properties of the blood, independent of the state of the organs of excretion.

At another time we contemplate the application of the preceding views to particular diseases and groups of diseases.



PART SECOND.

AMERICAN INTELLIGENCE.

SURGERY.

ART. I.—*Anomalous Case of Abdominal Tumor.* By P. J. BUCKNER, M. D.

While in attendance upon the meeting of the State Medical Society, in June last, CHARLES H. BEACH, M. D., of Wellington, Lorain county, called upon me, and gave such a description of a case of supposed ovarian disease, as induced me to visit the lady, a distance of two hundred and twenty miles, for the purpose of taking a history of the case; and, also, a drawing of the tumor. Accordingly, having procured the services of Mr. Johnson, a daguerreotype artist of the city of Cleveland, we reached the house of the patient, and received from herself the following history of her case: We confess that the appearance on actual inspection, so far exceeded our anticipations, that we fear, all we shall be able to say, will convey but a faint idea of the appearance of the patient, as she lay upon her couch.

Mrs. D. is in her 33d year, and has had five children. While pregnant with her first child, and in the sixth month of utero-gestation, she received an injury in the abdomen, over the right iliac region. From this time, she dates her disease. She, however, carried her child to the full time, and after a tedious labor, was delivered of a healthy child in June, 1838. Nothing unusual occurred, after the accouchment, except that she suffered from soreness in the right side, and pain and weakness in the loins. In September, 1840, she was delivered of her second child. Six weeks previous to her confinement, she lifted a heavy kettle, and hurt herself. After she recovered from a swoon, as she supposes, she found herself laying upon the floor. When she arose, she discovered a small tumor protruding from the vagina, which, upon lying down, did not disappear. This singular tumor has continued ever since, and as the further history will show, forms a remarkable feature in the case. For the sake of distinction, we shall denominate it *vaginal tumor.*

After the birth of her second child, for a period of eleven months, she continued in delicate health. She became pregnant the third time, and had advanced to the third month of gestation, when she became frightened at the sight of a large rattle snake. She felt immediately, the symptoms of labor, which in a few hours resulted in abortion. This occurred in 1841. Three days after, she took cold, having pain in the back, and tenderness and fullness of the abdomen. Her right side became sore to the touch, which increased, until it was so sensitive that even the weight of the bed-clothes was oppressive. She became pregnant the fourth time, and was delivered of a still-born child, at full time, about twenty months after the abortion. During the progress of this labor, the tumor which had protruded from the vagina, during her second pregnancy, now became a source of obstruc-

tion, having greatly enlarged and elongated. Its appearance at this time, was that of *erectile tissue*, pear shaped, protruding five inches beyond the os externum, two inches in diameter, and having its pedicle somewhere within the vagina, but beyond the touch. She continued in labor some forty hours, and was finally delivered of a full grown dead child. On the eleventh day, Dr. Johns, of Wellington, was sent for, who found her suffering from suppression of urine, accompanied with general inflammation of the external genitalia. The catheter was used frequently, and a general antiphlogistic treatment adopted. The difficulty of voiding urine continued several months, and the catheter had to be employed frequently. During this attack, Dr. Johns discovered a soft immovable tumor, a little to the right of the umbilicus, filling almost the entire right side of the abdomen. From this time, there was pretty rapid enlargement of the abdomen, which continued to increase for the space of a year. A tumor, also, made its appearance in the right labia, and extended to the nates. It was soft and elastic, and by firm compression could be returned within the abdomen or pelvis. This tumor, protruding and enlarging, we will denominate the *tumor from the hip*. It continued steadily to enlarge, as did also the abdominal tumor. A distinct fluctuation could be felt in both. This circumstance induced the belief that it was a case of dropsy. Diuretics and hydragogue cathartics were used freely and repeatedly, but with only a mitigation of the symptoms.

About this time, she removed a distance of thirty miles from Wellington, and out of reach of her family physician. She was seen by a number of physicians of respectability, who insisted that it was a case of ascites, and that she ought to be tapped. At length, she submitted to the operation, which was performed twice by different physicians. The first, punctured the abdomen in three places, without success, viz: in the linea alba, and semilunaris of each side. The second operator punctured in two places, under the confident expectation of finding fluid, but with no better success—not a drop was discharged. Some three months intervened between the operations.

Here was another case of "*Dry Tapping!*" Soon after this, she returned to her former residence, and placed herself again under Dr. John's care, with all the symptoms greatly aggravated. The vaginal tumor became gangrenous, and sloughed into deep ulcers. As soon as one ulcer healed, another was produced by the sloughing process. The disease was a source of intolerable suffering to the patient, as well as perplexity to the physician. In the course of nine months, the ulcers healed, under constitutional treatment, and the use of two parts pulvis rhei, and one of cinchonia, applied in form of dry powder, to the affected parts.

The extensive enlargement of the abdomen and tumors, induced a most distressing state of dyspnœa. As the tumor of the hip enlarged, however, it appeared to relieve the distress of breathing, and other troublesome symptoms. For weeks previous, her sufferings were indescribable; she could scarcely breathe or live, only as she would lie upon her elbows and knees, her head in a dependent position. Anodynes were constantly used to procure rest sufficient to sustain nature. She became urgent in her desire to have the tumor of the hip

opened, in the hope of finding a fluid, the discharge of which might give, at least, temporary relief.

Dr. Johns, who had always opposed tapping, yielded to her solicitations, and made a puncture, but no fluid escaped; fearing that he had not made the puncture free and deep enough, he plunged a large abscess lancet into the wound, making a deep and free incision. No fluid being discharged, he introduced a finger in the wound, but could feel nothing but a soft tissue, very much resembling the omentum. The wound was then closed by adhesive plaster, and healed kindly in a few days.

From this time, the disease was allowed to take its course, her strength being sustained by constitutional treatment. The tumor of the hip continued to enlarge, *and appeared to arrest the increase of size in the abdomen.* Her general health gradually improved, *and she again became pregnant.* Under such remarkable circumstances, the labor was greatly embarrassed and retarded. Finally, resort was had to artificial means, and the labor terminated. Her recovery was more speedy than could have been anticipated, and she returned to her former condition. A period of nearly three years has elapsed, and she remains with rather an improved state of health: and presents the astonishing appearance indicated in the plate. It is proper to state that up to the present period, her catamenia has been regular as to period and quantity, her digestive powers good, and the expression of her countenance animated and cheerful.

The case is one of an extraordiuary character; and the medical gentlemen who have examined it, are by no means agreed in their diagnosis. Dr. Johns thinks it an omental tumor, and that no fluid is connected with the morbid growth. Others have supposed it ovarian disease; and those gentlemen who tapped her, were confident it was a case of ascites. Of Prof. Ackley's opinion, (Dr. A. visited the patient some months ago,) I am not apprised.

From the history of the case, as now presented, we conclude:

1st. That the disease originated from inflammation induced from the injury received, during her first pregnancy—that it was followed by organic changes, *and accompanied by effusion.* The precise organ or tissue in which it commenced, is not clearly ascertained; but we are inclined to the opinion that it is ovarian in character, partly solid, and connected with an enormous cyst, which lies posterior to the more solid mass.

2d. That the great mass of the tumor is fluid, is indicated by the extensive and distinct fluctuation, manifested upon percussion, as well as that the contents of the tumor of the hip could be returned into the cavity of the body, until the distention of the abdomen became so great as to seriously affect respiration. We are of opinion that the fluid has forced its way through the thyroid foramen, and passing under the thigh, has carried the integuments of the nates and surrounding surface before it, thus producing the tumor of the hip.

The vaginal tumor could not be represented in the drawing, owing to its position; and we confess ourselves unable to determine satisfactorily, its true character. We incline to think it a branch or protrusion of the more solid part of the tumor, through the vagina.

Altogether, it is a most extraordinary case; and we have been at some trouble and expense in obtaining the facts. We present the case to the profession, more for its novelty, than for any practical deductions that may be drawn from it.

The whole weight of the patient is two hundred and fifty-five pounds. Her greatest weight previous to marriage was ninety-three pounds. Estimating her present weight at eighty pounds, her flesh being much reduced, would leave one hundred and seventy-five pounds as the weight of the morbid growth. The measurements of the tumor are as follows:

Transverse diameter, from sternum to apex of posterior tumor, three feet and nine inches.

Circumference around the abdomen or long diameter, seven feet and eight inches.

Circumference of tumor of hip, in long diameter, four feet.

Circumference of neck of tumor of hip, two feet two inches.

Length of tumor of hip, two feet six inches.

Short diameter of same, eighteen inches.

Length of anterior convexity of abdomen, from enciform cartilage to pubes, three feet and six inches.

P. J. BUCKNER, M. D. *Chairman.*

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ART. II.—*Typhoid Fever.* By DR. DAWSON.

The following is a portion of an article from the pen of our friend, Dr. DAWSON, on the subject of Typhoid Fever, read before the Ohio State Medical Society. We are disposed to present a part of this paper to our readers for two very important reasons. First, the disease, Typhoid Fever, is grave in its character, becoming more and more prevalent in our Western country, and demanding, on these accounts, thorough investigation. Second, the paper itself is worthy of perusal and careful consideration. The reader, though he may not adopt *all* the views of the author in every particular, will be enlightened on the important subject of which he treats.

We commence with that part which treats of Diagnosis, and give the balance of the paper:

Diagnosis. As well just here, as in any other place, we might notice a question of no small interest among pathologists, both in this country and Europe. We allude to the *identity* or *non-identity* of the complaint we have been considering, with that group of phenomena to which the name typhus has been applied. Into a lengthy consideration of the subject, we do not expect in this connection to enter.

To the merest tyro in the profession, it is known, that between the essential fevers, it matters not scarcely of what character, there is at

the commencement such an unity of symptoms, that it is very difficult, and sometimes impossible, to discriminate between them. All of them are usually ushered in by lassitude, pain in the head and back, aching of the bones, loss of appetite, furred tongue, etc. It is only therefore after certain characteristic phenomena arise in the progress of the morbid movements, that the essential fevers can be distinguished from each other.

Now, with reference to these distinctive phenomena, it may be remarked that, there are a number of them that are common, by general consent, to both typhus and typhoid. Among these we include those connected with the mode of access, temperature of the skin, state of the mind, of the circulatory function, of the nutritive function, being much alike do they also seem in their origin, occurring sporadically and epidemically, and in the manner in which they are propagated from one individual to another. The same remark is applicable to the prostration and duration of the two diseases; and also to the diminished cohesion in the solids and fluids, and to the modes of dying which obtain in each of them.

The features upon which most reliance are placed to make a difference between them, have been, by general consent, reduced to a very few. Among these the most prominent are the *lenticular rose-colored spots* upon the skin; and certain alterations in the intestinal, chiefly *the Peyerian* glands, both of which have been regarded as being peculiar to typhoid fever.

For a considerable time the rose-colored spots, as a diagnostic, was regarded with great interest. Indeed, the language of a late writer, (Bartlett) is that "there is good reason to think that this eruption is almost an invariable accompaniment of typhoid fever." With more confidence than this, the views of others have been expressed. As a consequence, the attention of the profession has lately been industriously directed to the matter wherever and whenever opportunities have presented.

In considering this subject, we presume, that it should not be expected that the relation which obtains between a symptom, regarded as diagnostic, and the disease, should be constant and invariable. This would be fixing up a standard for the discrimination of diseases, to which, from experience, we have found them not always conforming. Diarrhœa is one of the most invariable accompaniments of typhoid fever, yet, in the case detailed at length in this paper, it was absent. Louis and others also found it absent in a small number of cases. Indeed, there is no one symptom of typhoid fever, but what has been occasionally found to be absent. When, however, there is reason to suppose that the alledged diagnostic has not been of itself submitted to the crucible of observation, under a sufficient variety of circumstances to ascertain its true character, and that it is also found in connection with other complaints, it would seem that prudence would justify a suspension of belief, until the matter is more thoroughly investigated.

Dr. Stewart, of the Glasgow Fever Hospital, has bestowed perhaps more attention than any other man, to the nature of the rose-colored lenticular spots. He remarks that the eruption, instead of consisting of successive crops of the spots, presents the two periods, longer or

shorter, of increase and decline; "and that, in the more severe cases, it may exhibit during the period of increase, four different states, being *florid, dark, livid*, and *petechial*. When the hue of the eruption is florid, it disappears readily under pressure; when dark, it still disappears, but more slowly; when livid, semi-petechial or pseudo-petechial, as it has been called, it is only partially effaced; and when petechial, it is not in the least effected by pressure." Dr. Drake, among his many tours of observation, made one to our northern chain of lakes; and it happened that he had an opportunity, at Gros Isle, of examining a number of cases of typhus fever, among the immigrants from Ireland. From his own observations, and the testimony of the resident physicians of different hospitals in that region, he feels himself warranted in making the following remarks:

"The skin shows various kinds of maculæ. In a few cases genuine *rose-colored spots* show themselves, but very soon assume a darker color. In the majority, the spots are purple from their first appearance, and of every size, from ordinary petechia up to diffused echymosis, often bearing a close resemblance to post-mortem hyperamas. In some cases the spots are like whelks, and the seat of a sensation which leads the patient to scratch them, whereupon ulcers follow, which occasionally assume a sloughing character."

From this testimony of Drs. Stewart and Drake, it would seem to appear that these rose-colored spots, relied upon in the diagnosis of typhoid fever are nothing more or less than a variety of petechia; or rather constitute the florid stage of petechia; for the language of Dr. Stewart is, that he has seen them pass successively through the florid, dark, and livid, to the petechial stage. But the circumstance of the eruption making its appearance in another disease — typhus, seems calculated also to weaken our confidence in its diagnostic value. As above incidentally stated, Dr. Drake, in the epidemic of typhus among the immigrants at Gros Isle, noticed the genuine lenticular rose-colored spots. The chairman of the committee on Practical Medicine, of the American Medical Association, states, that during the prevalence of typhus in the New York Hospital, in June 1840, and at various times subsequently, the eruption regarded as peculiar to typhoid, was frequently observed in cases of typhus, of the identical nature of which there was not the slightest doubt, all of them having originated from the same source, namely, the fever poison, ideo miasma, generated in crowded immigrant ships.

Differing therefore in no respect from the eruption of typhus, and and actually occurring in typhus, well marked and distinctive, these rose-colored spots alledged to be pathognomoniac of the typhoid affections, must loose their importance unless there is a disposition to make distinctions where there is no difference. The reasoning appears to have at first been founded upon too limited a number of observations, and as a consequence, partakes strongly of the character of what logical writers call a *fallacia accidentis*.

Invoked, if possible, with still more confidence, have been the *alterations of structure*, which are alledged to be peculiar to typhoid fever. Indeed, since the time when Louis first made the impression, that the esions in the typ oid affections are *sui generis*, there has been, both

in this country and Europe, a great development of industry among pathologists to ascertain, if possible, the correctness of the views of the distinguished Frenchman. While this has been going on, it seems to be true, that many circumstances connected with the essential fevers have not received that share of attention which is necessary in order to a correct diagnosis.

Anterior to Louis' researches, the structural changes, which occur during the progress of most fevers, were but slightly investigated, compared with the accuracy and elaborateness of which Louis was the author, and which now generally obtains. What, it may be inquired, was known of the morbid anatomy of the *low* fever of Hippocrates and Galen, the *tumulees pestis* of Van Helmont, the *putrid malignant* of Reverias, the *pestilential* of Sydenbum, the *malignant* of Bellini, the *putrid* of Sanctonius, the *continual putrid* of Boerhaave, the *jail, hospital* or *camp* of Pringle, the *putrid, malignant* and *nervous* of Huxham, the *petechial* of Francastorinus, the *spotted* of Brooks, and the *typhus* of Cullen, Thomas, etc.? Often there were no post mortem examinations at all made; and, as a consequence, the same disease received different names according to the fancy of the physician, or the development of some particular feature during its course.

With this general statement, with regard to the attention which has been given heretofore to the morbid anatomy of fevers, it may now be submitted, that the dothinenteritis, which has been regarded as a distinguishing characteristic of typhoid fever, is now found in other diseases also, perhaps with the most frequency in the genuine *typhus*. Antiquated as he is, Van Helmont noticed the frequent complication of typhus with diarrhœa. Dr. N. Smith, of our own country, says he never knew a case of typhus to terminate fatally without diarrhœa. In his *Illustrations of Fever*, Dr. Tweedee gives structural changes of the intestinal tube, as being among the prevailing lesions. Kennedy, in giving an account of the *typhus* which prevailed in Dublin, in 1837 and 1838, says that it differed materially in its morbid anatomy from the epidemic of 1826. The former was characterized with a constant congestion of the brain, to the exclusion of any material abdominal lesions; the latter exhibited almost constantly disease of the glands of Peyer. Drs. Graves and Stokes, of the Medical Hospital, in accordance with a custom that obtains among some enlightened German physicians, divides typhus into three varieties, the cerebral, the pectoral, and the abdominal, accordingly as the viscera in the one or the other of these great cavities are affected. It is also well known that the English, Irish and Scotch physicians have devoted no little time and care to an investigation of the pathology of febrile disorders; and, with great unanimity they have come to the conclusion that there is no foundation for the distinction between typhus and typhoid.

Further, Dr. Lombard, of Geneva, who was well acquainted with the typhoid fever, of Paris, and other continental cities, visited England, Scotland, and Ireland, in 1836, and compared the British typhus with what he had been in the habit of regarding as typhoid. Finding, in some cases, the symptoms of the typhoid fever of the continent, with which he was familliar, he expected to find after death the usual dothinenteritic lesions, but they were not present.

To such testimony, we might add the descriptions given by Dr. Gerrhard, of Philadelphia, of two epidemics occurring in that city, in different years; and, also, the testimony of Dr. Stone, of the New York Hospital, who tells us that in post-mortemising about twenty-five cases of those who died with typhus, disease of Peyer's glands was found in about one-fourth of the number.

The *effects* of *remedies* are at times a valuable source of diagnosis. In the effects resulting from the use of the lancet and drugs, there is a great degree of similarity between the two complaints. Both, according to general experience, do as well, if not better, without than with general blood letting. It seems that it is better in both complaints, to economize the resources of the system from the beginning, than to abstract from it a portion of the *vital fluid* for a temporary gain. Both, also, appear to resemble in their want of respect to any article of the materia medica addressed to the system with a view to expel them from it before their law of self-limitation expires.

Considered, then, in relation to their *history*, *symptoms*, *pathological anatomy*, or the *effects of remedies*, there seems to be much that is calculated to create a rational scepticism as to the position that the diseases are essentially different.

Further, however, we may submit, that to attempt to explain every pathological phenomena, by a difference of arrangement of matter, is to have recourse to hypothesis. It is likely to be true, that the various differences in the arrangement of the matter, of which the organism while in a state of disease is composed, are effects, and not causes, of the primum mobile of disease. To predicate, therefore, a *differential* diagnosis, upon alterations of texture, to the wants of a proper consideration of all other circumstances, is a process of investigation strongly impregnated with fallacy. It is true, also, that the dothinenteritis occurs in other diseases besides typhoid and typhus. It is observed, occasionally, in fever of malarious origin, and also in the contagious exanthemata. A classification, therefore, founded upon structural alterations, would include these affections with typhoid fever.

But it may be inquired here, how are we to account for the frequency with which this form of disease, which Bretonnea calls dothinenteritis; Andral, *follicolar enteritis;* Rederer and Waglor, *mucous* fever; Broussais, *adynamic gastro enterritsi;* Louis, Chomel, and others, the *typhoid* fever, is found associated with lesions of the intestinal glands? An answer to this question may be sought for with some success, in a consideration of the fact, familiar to all acquainted with morbid movements, that the same disease, at different times, and under different circumstances, including *locality*, *habit*, *modes of living*, *prevalence of other diseases*, &c., seems to be so essentially changed in character, that for its cure an entirely different system of therapeutics is required. It has not escaped the attention of any, that since the advent of *cholera* in '32, diseases, in general, have been very different from what they were before. In accordance with the same principle, typhus may undergo modifications, touching not only its leading symptoms, but also its morbid anatomy. Pringle, Marcus, and Clutterbuck, observing it at a certain time, all know, found the

predominant lesion to be inflammation of the brain; Armstrong, at another time, congestion of the brain, lungs, and alimentary canal; Hildebrand, at another time, inflammation of all the mucous membranes; and Cruvelheir, Serres, Louis, and others, under the circumstances peculiar to the French, as a nation, may possibly have observed the same disease characterized most constantly with intestinal leisons, chiefly of the glands, of Peyer.

CONTAGION.

Of no small importance, is the question relating to the *contagious* character of this disease. Incidentally, in a previous part of this paper, we alluded to a number of instances in which it seemed to originate spontaneously, and was afterwards transmitted, from a focus of this kind, most frequently to nurses, and often to visitors. It is unnecessary in this place, to review these facts again. Many of a similar character has been observed by physicians, wherever typhoid fever has prevailed. Louis, in the first edition of his work, is silent in regard to the contagious character of the complaint; and Andral says he never saw any evidence of its contagiousness. Bretanneau, however, read a paper to the Royal Academy of Medicine, in 1829, designed to show that the disease is often transmitted from one individual to another. Learet, Gendron, and others, adopted a similar opinion; and Louis, in the edition of his work, published in 1841, agrees with them. The testimony of some of the ablest observers in our own country, such as Drs. Smith, Jackson, and others, coincides with that of the physicians of France. It may, therefore, be set down as the general opinion, that the disease is contagious.

With respect to the manner in which it is transmitted from one individual to another, there is some diversity of opinion. Some suppose its propagation due to a specific virus that, like the virus of small pox, operates on the system so as to produce with great uniformity a characteristic set of lesions, functional and structural; others suppose that it is due to a certain *constituo aeris*.

With reference to the mode in which the poison, after it is once generated, spreads from one person so as to affect nurses and visitors, an explanation may be facilitated by a brief recurrence to first principles. The most primary form of every thing relating to the various tissues of the body, is nucleated cells. Upon these, likely, the *materies morbi* makes the impression that ultimates in the first departure from the physiological state. While in health, the births and deaths of these cells are *in equillibrio*. During disease, this state of things is altered to a proponderance of deaths. On the death of a cell, the elementary materials of which it was composed while sustaining its normal relations to the system, seek new alliances, form new compounds, and thus become prepared to be discharged from the system by the various emunctories. During this process of destructive assimilation, these compounds of effete matter become endowed with the property of importing a tendency to similar transformations among the materials of which the living cells, with which they happen to come in contact, are composed.

Now we know, that through the skin, lungs, kidneys, liver and glands of the ileon and colan, much of this matter, while in a state of transformation, finds an exit from the system, to contaminate the atmosphere surrounding the patient. This atmosphere, there is the greatest reason to believe, acquires the property of exciting transformations among the elements of which the neucleated cells of persons in a state of health are composed, and in this way the disease is propagated from the sick to those in health, with as much certainty, as if the poison were introduced mechanically beneath the epidemis.

There are a number of analogies which lend probability to this view. All are familiar with the fact, that gluten in a state of decay or putrefaction, causes a similar transformation in a solution of sugar, and that a portion of putrefying animal matter, such, for example, as muscle, blood, or pus, placed upon a fresh wound, causes disease and sometimes death. The fatal disease often contracted in the dissecting room, owes its existence to wounds made with a scalpel in dissecting a subject, the solids and fluids of which were, at the time, in a state of transformation.

We need be at no loss in accounting for sufficient accumulations of organic animal matter, in the atmosphere surrounding a patient, sick with typhoid fever, to serve the purpose of exciting diseased action among those who breathe it for any length of time.

Sanctorius, as all know, laid the foundation for ascertaining the quantity of matter lost by the system while in health, every twenty-four hours, by weighing himself, what food and drink he took, also his solid and liquid discharges, every day, for a period of thirty years. To perfect this interesting inquiry, it was reserved for Keill, Van Gorter, Lavoisier, Sequin, and Ancell. When the injesta consisted of 75 ounces, Keill found the daily average of fœces to be 5 ounces, the urine 38, and the perspiration 31. Van Gorter's experiments, when the ingesta were 91 ounces, made the fœces to weigh 8 ounces, the urine 36, and the perspiration 49. Lavoisier and Sequin undertook to separate the excretions and determine their absolute quantities. These gentlemen found that the loss of weight caused by insensible transpiration, is 18 grains per minute ; and that of these 18 grains, 11 are the average belonging to the cutaneous transpiration, and 7 to the pulmonary. From such statements, and others, it appears that the amount of cutaneous and pulmonary excretion exceed the aggregate sum of the urine and fœces, being, according to Sanctorius, in the ratio of five to three.

From the fact that the urinary and fœcal discharges are periodical, and usually removed at once from the room, they are not apt to become as great a source of disease, as those which are perpetually escaping from the lungs and skin. From the two emunctories, however, the daily average, according to the authors just noticed, is about 40 ounces, 10 dwts. of which is organic animal matter.

It must however be borne in mind, that these amounts of waste matter are thrown off from the system while in health, and it is therefore reasonable to conclude, that while under the influence of disease, the quantity may vary ; the destruction, particularly of the cells of the netrogenized tissues, greatly preponderating over what takes place in a physiological condition of the system.

It, indeed, requires no labor to calculate the immense amount of matter which three or four hundred men will eliminate from the lungs and skin alone, during the time that a sail vessel ordinarily occupies in crossing the Atlantic. It will amount to a number of thousands of pounds, so much of which accumulates on the beds, furniture, walls of the room, and wearing apparel, as often to render even an inspection of it dangerous in the extreme.

Liberated from the system, or perhaps previously, the elements of this excreted matter undergo transformations similar to what, as previously suggested, takes place in blood, pus, or muscle, when removed from under the influence of the vital force. Coming therefore in contact with an abraded surface, or operating through the medium of the atmosphere on mucous membrane, a series of changes are excited; in other words, the equilibrium existing between the elements out of which the cells of the solids and corpuscles of the blood are composed, becomes disturbed in such a way that other affinities than those existing in the physiological state are developed, giving rise to those arrangements, that so much resemble fermentation, and the tendency of which are to give a continued predominance to the process of waste.

The striking case related by Dr. Harty, is to the point. The facts are, that a woman who had been confined by her husband, for weeks, in a dark small closet, without light, air, or a change of clothes, was liberated by two gentlemen, who while doing so were very much overpowered by the effluvia arising from the place. At the end of a week, both of these gentlemen sickened with fever; one died, the other recovered with difficulty.

The origin and spread of jail, camp, hospital and ship fever, together with some of the plagues of ancient writers, such, for example, as the Athenian, which occurred in the time of Pericles, and is described by Thucydydes in such thrilling terms, have, in former times been subjects of difficult comprehension. The imaginary principle called "*idio miasma,*" as a consequence, has figured largely in the explanation. Applied merely to designate the compound of excreted matter which serves as the poison to generate the disease, it may, until the exact chemical character of this is known, answer the purpose as well as any other arbitrary term. To organic chemistry, the chemical nature of the processes of waste and supply, we are indebted for explanations which render the whole matter more intelligible.

Adopting this method of explaining the origin and propagation of typhoid fever, we can see no impropriety in applying it to many other diseases of a virulent character, where the secretions and excretions of the system become very much vitiated. Indeed it has long been observed, that many diseases, after arriving at a low putrid stage, send out emanations that excite diseased action among those very much exposed to their influence. The process, however, by which this has been brought about, has never been explained in a rational manner, until since the attention of the pathologist has been called to the light thrown around the subject by the labors of organic chemists.

In concluding this part of our subject, we sum up in the following propositions:

1st. The disease often originates apparently under an epidemic constitution of the atmosphere, giving rise to a single isolated case, or perhaps a number of cases at about the same time.

2d. It is capable, also, of propagating itself according to the laws of contagion, extending to nurses and visitors.

3d. In instances of contagion, the *materies morbi* is most likely the result of the excretory matter given out by the emunctories, during the course of the disease, and principally comes from the skin and lungs.

4th. This excretory matter being in a state of transformation, and coming in contact with mucous membrane or an abraded surface of the skin, excites disease in the same way that it is excited by putrifying blood, pus, or muscle placed on a fresh wound.

THERAPEIA.

At the present time our knowledge of the treatment of typhoid fever is imperfect; and to the slowness with which we have come to a knowledge of the nature of the disease, and its relations to medicines, may be attributed the want of uniformity that obtains in the treatment the world over. It is impossible, within any reasonable limits, to refer to all the plans of treatment to which the disease, from time to time, has been subjected. Briefly, however, we will glance at some of the more prominent. The French plans are various. Chomels is for the most part rational on symptomatic. He prescribes for symptoms as they arise, and adopts an antiphlogistic course when the form of disease is inflammatory. Bouillard's method consists in copious and frequently repeated abstractions of blood, in every stage. De Larroque's plan consists in the use of evacuants, principally purgatives. Louis, in the second edition of his work, is undecided in his opinion as to what is the best system of therapeutics; and, it is said, that he now practices the purgative plan of De Larroque. This is a meagre synopsis of the different modes of treating the complaint by the most able men of the world, enjoying all the advantages of the extensive hospitals of Paris. In our own country, all plans, from the "*Expectant*" to the rigor of the mercurial, have been successively tried, abandoned and tried again; so that, at present, we are in much the same condition that they are in France — without any, in favor of which there is anything like a uniformity of feeling. Many of those practitioners, who had *ptyalised* with much success in the malarious fevers common to the Mississippi valley, had, on the appearance of typhoid fever, great confidence in this measure. By numerous experiments their confidence has been dissipated, and many of them, particularly those who have had the most experience, now regard the plan as injurious.

In this unsettled condition of the profession in regard to the treatment of this, now very common, disease, we will give the result, in a very brief manner, of our own limited observations.

In treating typhoid fever, it matters not upon what plan, it should

constantly be borne in mind that it has a certain cycle of changes through which it will run, and from which it cannot be moved. Any one observing closely its pathological habitudes, would just as soon expect that he could stop a case of small-pox in the middle of its course, as a case of typhoid fever. This, therefore, we regard as a fundamental principle, and, upon the appreciation of which, the success of the practitioner will very much depend. Our remarks here apply to the disease after it has got complete possession of the system. What drugs, or appliances of any kind, might do in the stage of incubation, is another question; and it is probable that, by a judicious use of them in this stage, the disease might be arrested. In relation even to this, we confess that our confidence has diminished, as our acquaintance with the disease has increased. In 1844, in publishing some remarks on this point, we expressed the opinion that *emetics* might break up the train of morbid action in the forming stage. Since, however, we have had more experience in the treatment of this stage, it appears most probable that the cases upon which that opinion was founded, supposed to be typhoid fever, in the stage of incubation, were likely nothing more than the indisposition so frequently noticed among nurses, from exposure and fatigue. At present, therefore, we would as soon expect to break down a case of scarlatina, or measels in the forming stage, as a case of typhoid fever.

Such views being correct, drugs of all kinds take a position in the treatment very different from what they have in the treatment of many other complaints. Regarded as having an absolute curative relation to the disease, in any of its stages, they will not only be apt to disappoint the expectations of the practitioner, but will materially embarrass the progress of a case that otherwise might have went to a favorable issue.

Another consideration that we regard as having a close relation to success in the treatment, is the great length of time that the disease usually occupies in running its course, and the great preponderance of waste over supply during all this time. The great emaciation which obtains in severe cases, towards the close, not only embarrases the operation of medicine, but is not unfrequently the cause of death. As a consequence, medicines or measures calculated to add to the wasting process of the tissues, incident to the disease, will, as a general rule, exercise a pernicious effect.

This view cuts off the bleeding and purgative plans of treatment, and, indeed, is incompatible with any that does not take into consideration the necessity of economising the resources of the system from the beginning to the end.

Naturally the question here arises, as to what is the best plan of treatment. We answer, that so far as we are capable of judging, there is no one plan applicable to all cases. There are different forms of the disease, from the simple to the complicated; and as a consequence, these forms require different modes of relief.

Simple cases need but little if any medicine at all. Refreshing drinks, measures caculated to cleanse and cool the skin, and something to restrain diarrhœa when excessive, are the principal of what such cases require.

In even the inflammatory and adynamic forms of the disease, we are in favor of using drugs sparingly.

With respect to the relative value of the different articles of the materia medica in fulfilling indications, we do not design to speak at length. To restrain diarrhœa, one of the most frequent and troublesome symptoms, we have never found any thing better than opium. Uncommon heat of the surface, attended with high fever and pain in the head, are very successfully controlled by the *free use of cold water, internally and externally*. When cases require purging, our favorite article is hydrarygum c. creta. For the incoherence and delirium, which so frequently obtains, we have found nothing better than camphor, in small doses, frequently repeated. Hemorrhage from the bowels we treat with doses of opium sufficiently large to suspend entirely the movements of the intestines. Where there seems to be a tendency to putridity we use quinine during the whole course, and such other strengthening medicines as seem, from time to time, to be required. In the sinking stage we use stimulants — carbonate of ammonia, wine, and wine whey; but confess that we have never seen any thing but equivocal effects from their administration.

DIETETICA.

Throughout the course we use a sustaining system of dietetics. Our reason for this is founded upon the usual duration of severe cases. Very often this exceeds the time, at which, in health, without food, starvation would occur. Indeed the duration of the malady often doubles the period of starvation. As a consequence of this circumstance, the administration of food, from the beginning to the end of the disease, becomes a matter second in importance to nothing else connected with the treatment. Often patients, at the commencement, have no relish for any thing to eat, but loathe even the smell of diet of all kinds. Notwithstanding this, they should be made aware of the necessity of the measure, and when they are satisfied of this, they can be induced to take food. Among the many articles of diet proper, of course the patient's preference ought to be consulted. Soup, made from muscle, because of the chemical identity of this substance with blood, and the ease with which it is usually assimilated, is, of all articles, particularly in cases connected with great prostration and a rapid wasting of the tissues, to be preferred. Besides this, the greatest proportion of waste falls upon the muscular tissues, and this constitutes another reason why an article identical in its chemical elements with muscle should take a prominent place in the dietetics. Next to muscular tissues, the greatest loss that takes place by destructive assimilation, or the process of waste, is in the deposit of fat. Fat is now regarded as containing the elements that go to support the function of respiration. Now, we know that this function is very much accelerated in the disease before us, from its beginning to its end, and, as a consequence, for its support, requires a larger proportion of fat, or substances containing the elements from which this substance is formed, than would be the case in a physiological condition of the system. Articles, therefore, containing fat already form-

ed, or those, such as starch, sugar, and gum, that, by the mere separation of a portion of their oxygen, readily pass into fat, should, if the views submitted, be correct, constitute no inconsiderable proportion of the nourishment. In many cases, sometimes in most of the cases of an epidemic, there seems to be a diminished cohesion of the solids and fluids, a kind of putrid diathesis. To oppose this state of things saccharine articles, beer, and wine of different kinds, have been used; but considering the ambiguous results of such articles, it may safely be presumed that in resisting the septic tendency, as much can be done by keeping the nutritive process in vigorous action as in any other way.

In conclusion, we submit, as a summary, the following propositions:

1st. In its mode of access, the disease is various, sometimes occupying two weeks, or more, in the stage of incubation; and, at other times, making its advent suddenly.

2d. The febrile symptoms, in the general, are not characterized with intensity — the action of the heart and arteries, heat of surface, etc., being in the usual way moderate.

3d. The tongue passes, in the different forms, through all the changes to which the organ is liable — from a pale, moist condition, with but a light coat upon it, to that of a dark brown or black, attended with dryness.

4th. In its functions, the skin is less altered than any other organ, if we except the maculæ, of which it is the occasional seat.

5th. The abdomen, externally and internally, as a general rule, exhibits signs of disease.

6th. Hemorrhage from the bowels is more frequent in this than in any other disease with which we are acquainted.

7th. The affections of the brain vary, from a mere aberration of function, to delirium and coma.

8th. The mucous membrane of the air passages is frequently the point upon which the morbid force spends its principal violence.

9th. Emaciation and debility are characteristics of all grave cases; and the process of waste falls with most force upon the muscular tissue and adipose deposit.

10th. The times most propitious for the origin and spread of the malady are winter and spring.

11th. The persons most predisposed to attacks, range from 18 to 40 years of age.

12th. The disease exhibits no exclusive preference for filth, or bad habits, but originates and prevails in neighborhoods and families where the habits, as far as appreciable, are unexceptionable.

13th. The duration ranges from two weeks, to two months, and sometimes to three months.

14th. Relapses are of very frequent occurrence, and are generally brought about by errors in diet.

15th. Death, in the majority of cases, seems to take place from the morbid forces operating upon all the great functions of life in such a way that they seem to be overwhelmed: sometimes from hæmorrhage from the bowels, and occasionally from nothing that is apparent, but debility.

16th. The diagnosis is difficult. Regarded by its history, symptoms, morbid anatomy, or the effects of remedies, the disease differs in no material respect from the typhus of the older writers; if we except the greater frequency, now than formerly, of intestinal lesions.

17th. The treatment, in order to be successful, should take into consideration: first, that the disease has a certain cycle of changes through which it will run, and from which it cannot be moved; second, the necessity also of economising the resources of the system from the beginning, so as to have on hand a sufficient supply of the vital force for the exigencies connected with the great duration.

18th. The drugs, or appliances, as a consequence, addressed to the complaint, with a view of cutting it short, in any of its stages, will not only prove useless, but frequently injurious.

19th. There is no one plan of medical treatment applicable to all cases. The disease has different forms and different grades of violence, and with these the therapeuties must correspond.

20th. A system of dietetics, founded upon the chemical composition of the tissues and deposites, sustaining the greatest relative proportion of loss during the course of the malady, may be regarded as a measure of vital importance.

ART. III.—*Bleeding from the Temporal Artery.* By J. B. EVANS, M. D., of Ross county, O.

I very well know that the doctrine of blood letting is considered a questionable remedy in low orders of disease, when it is necessary to economize the patient's strength so far as can be done. And it is only after careful discrimination, that it should be practiced.

I do not advocate or adopt it in typhoid fever, only in peculiar cases. But some half dozen times I have practiced it, when I think other means would not have reached the case. In these, it was resorted to only in the last extremity, when there were evident signs of determination to the head; with that peculiar delirium that to me is a harbinger of approaching death. These were all benefited, and all recovered, except one, and that one became rational, and remained so for some days, and I think would have recovered, only for previous disease of the lungs. In this condition there is a most decided benefit by a careful bleeding, from one or both temporal arteries, when the patient will gradually become more calm, and I have known them to fall into a good sleep, when they had hardly been known to sleep for days. I thought cold applications did no good in these cases. Perhaps there was not "vital force" sufficient in this condition to overcome the congestion. Hence the necessity of relieving

that vital part, so far as practicable, by bloodl-etting. It is difficult to know the exact amount of blood taken; but it varied according to the effect produced. I think the quantity would vary from two to six ounces.

Now, permit me to say, that I have not been more gratified, or received more credit for any act in my professional life, than for blood-letting in these cases.

ART. IV.—*Fœtal Monster.* By E. T. BROWN, Logan, O.

On the night of the 6th of October, I was called to attend Mrs. R., in her second confinement. I was met near the house by the husband, who told me that the child was born soon after the messenger left the house, but that "the child was not right, having a tumor on its breast"—inquiring, at the same time, "if it could not be removed." I waived a direct answer to his question, by saying that I could tell more about it after seeing the child. My first care on entering the house was to attend to the comfort of the mother. The placenta was removed without difficulty, and after applying a bandage, I proceeded to examine the child, being previously informed that it was an "eight months' child." On unwrapping it, I found an almost entire absence of the abdominal integuments. The opening was nearly circular, with irregular and abrupt edges. Through this opening the intestines and liver protruded, covered only by a thin transparent membrane. The viscera of the abdomen could, in almost their whole extent, be plainly seen. The membrane seemed to come from the inner surface of the irregular opening, and was continued into and finally lost in the funis. As handling the contents of the sac gave the child great uneasiness, I did not examine the parts as much as I should have done under other circumstances. In addition to this malformation, the child had on each hand five well formed fingers, and six toes on each foot. The child lived three days, suffering all the time with convulsions. Before leaving, I asked permission to examine the body after death, which was readily granted; but owing to unavoidable absence, an examination was not made. A case bearing some resemblance to this, only more interesting from fuller detail, is recorded in the London Lancet for January, 1850, page 45.

Art. V.—*Nitrate of Silver in Leucorrhea.*

Dr. N. B. Anderson, of Louisville, Ky., strongly recommends the solid nitrate of silver to the cervix uteri, and adjacent parts—by means of the speculum—as the true remedy for leucorrhea. Dr. Anderson urges, with much force, the necessity of resorting to the speculum, as the only means of correct diagnosis or treatment, in leucorrhea. He has found that the disease is, almost invariably, connected with an ulcerated condition of the neck of the uterus, and he believes that astringent injections are very *inefficacious* in reaching the seat of the disease, which requires the application of solid caustic. He gives the following account of his experience and practice:

"In the course of the last year I have had an opportunity of treating forty-one cases of leucorrhea, and the results have been so satisfactory that I feel justified in submitting my experience to the profession. I am sure that no physician, after trying the improved method, will ever be satisfied to return to the old practice of tonics and astringent injections. Not that tonics are not useful in their proper place. I have found them highly beneficial in many cases, but they are to be looked upon as adjuvants to the main remedy—the nitrate of silver locally applied. So long as the morbid condition giving rise to the unhealthy secretion continues, constitutional remedies are of no avail. The cause must first be removed, and at a knowledge of this, as has already been remarked, we must arrive by means of the speculum.

"In nine cases out of ten which have come under my treatment, I have found no difficulty in obtaining the consent of the patient to the use of the speculum: the woman is then placed in a horizontal position on a lounge or bed, the hips elevated higher than the head; a loose sheet is thrown over her person, in which is an aperture sufficient to admit the speculum; (that which I use is glass;) it is well lubricated, and then insinuated as far as possible into the vagina, following the axis of the pelvis;—the os uteri readily descends into the mouth of the instrument, inclining backwards and downwards, which, by depressing the handle, will remain in the centre of the instrument. In this position, before a window, or with the use of a candle, the organ can be viewed to its full extent, and the ulcerated surface found. In nearly every case it presents the same appearance. The neck is found flabby, swollen, and of a pale red and bluish cast—the anterior and posterior lips being much elongated, with the

greater portion of the neck ulcerated to some extent. In about one-half of the cases, the ulceration is within, as well as without the neck, and extends some distance into the cavity of the uterus; whilst in the remaining half, it is limited to an area of one-third of the neck, and anterior and posterior lips, the cavity not partaking of the ulceration. In every case, the ulcerated surface is to some extent the same, with but little sensibility about the parts; no pain is ever felt on applying the caustic freely, both around the neck and within the uterine cavity, for the mouth is always open sufficiently to admit of its introduction.

"In the first place, the parts are cleansed with a soft sponge attached to a whale-bone handle, in mop shape, after which the nitrate of silver, in the solid form, is applied very freely to every part diseased. This operation is repeated according to indications, from three to seven days apart, and during the interval, cold water injections several times a day are to be used conjointly with tonics. In some cases I have used the speculum as often as ten times, but in the great majority of cases, it is not necessary to resort to it so often.

"Those cases in which the ulceration was seated within the neck and cavity of the uterus occurred in weakly females, who had borne a great number of children, and some with the aid of forceps. In unmarried ladies, it was always seated on the external parts of the neck, and the anterior lip. In the cases in which the cavity was implicated, the free use of the silver was not found to have interfered in the least with the catamenia.

"In almost every case where a female does not bear children, I have found fluor albus to be present;—unquestionably this disease is a frequent cause of sterility; the ulceration of the neck and cavity interfering with the intromission of the semen, which passes away with the profuse discharge."—*Abridged from Western Jour. Med. and Surgery, in Med. Examiner.*

Art. VI.—*Lemon-Juice in Acute Rheumatism.*

Dr. Babington of Guy's Hospital, London, reports in the London Lancet, 8th November, 1851, several cases of acute rheumatism, treated with lemon-juice, in which "he found it answer the most sanguine expectations."

"The lemon-juice which Dr. Babington employed was procured from a wholesale confectioner, the price being no more than sixpence

per pint, when retailed in small quantity, and considerably less when furnished by the gallon. When Dr. Babington commenced making trials of the lemon-juice, he prescribed it according to the recommendation of Dr. Owen Rees, in doses of from one to two ounces, three times a day, for an adult. More recently, however, he had ordered not less than three ounces, and much more—usually six ounces—taken at a draught, and without any admixture, three times a day. It might be supposed that the patient would find some difficulty in drinking so large a quantity of such a sour liquid, but this is rarely the case; nor does it in general produce tormina, nor otherwise disagree with the alimentary canal. Instead of relaxing the bowels, as might have been expected, it renders them somewhat costive, so that it not unfrequently becomes necessary to exhibit an aperient. The juice produces no very decided effect upon the kidneys, merely tending by its quantity to promote their secretion. It increases cutaneous action, but to what extent it is difficult to determine, because in rheumatism, a disease in which this remedy is chiefly useful, the complaint itself is marked by the occurrence of profuse perspiration. The only unequivocal effect wnich uniformly takes place is a diminution in the number and power of the pulse, and of the heart's action. Whether it alters the character of the blood, or whether it affects the heart by diminishing nervous influence, Dr. Babington has not had an opportunity of determining."—*London Lancet.*

ART. VII.—*Case of Lead Palsy, resulting from the use of Soda-Water, contaminated with Lead.*

Dr. D. Macgibbon, of the Charity Hospital, N. O., reports in the N. O. Medical and Surgical Journal, for November, 1851, a very well marked case of lead colic, followed by severe paralysis, which was attended with *blueness of the gums*—the pathognomonic sign of the presence of lead in the system—and was clearly traceable to lead taken in soda-water. "The patient kept a small store in Camp, near Julia street, in which, since the warm season commenced, she kept soda-water for sale. The fountain had leaden tube attachments to it for drawing off the fluid; and on an average only one fountain of soda-water was used in a week on the premises, thus leaving its contents a sufficiently long time for the free acid to act on the leaden pipe, and also for a portion of the carbonate of lead thus formed, to be diffused throughout it. She was usually in the habit, when she

arose in the morning, of drawing off a glass of this beverage and drinking it; the first portion which escaped she always threw away, having heard somewhere that this was not proper to be drunk. She also throughout the day would usually drink two or three more glasses of this, which was about the amount she consumed according to her own account."

Dr. M. states that "lead has, in many instances lately, been detected by the most conclusive chemical tests, in the soda-water sold in New Orleans, and that, too, where less favorable circumstances prevailed than above," and he has no doubt of the saturnine origin of the case described.—*Phila. Medical Examiner.*

PART THIRD.

FOREIGN INTELLIGENCE.

PRACTICAL MEDICINE, &c.

ART. I.—*On the Treatment of Obstruction of the Bowels.* By EDWARD WELLS, M.D., Oxon.

In some preliminary remarks, the author informs us that it is not his object to treat of intestinal obstructions from causes external to the tube, as tumors, &c., nor of obstruction arising from internal causes, as hardened fæces, neither of those cases which originate in hernia. The cases which he has in view are those which have no demonstrable cause of the obstruction, such as in the following supposed case: You are called to a patient, who informs you that he has had no proper relief from the bowels for the last seven or eight days, that he has been to the druggist, and taken black dose upon black dose, pill upon pill, and that they are all in him, and he wants to know what he is to do next. He tells you, further, that it is true he has been to stool once or twice, or perhaps oftener during the time, that he has perhaps on each occasion passed something, but he is sure it is not what he ought to have passed. In short, to use his own expression, although he has occasionally had a scanty evacuation, he is convinced that "*nothing has gone through him.*" Upon examining the abdomen, you find some distension around the umbilicus, with

a degree of tenderness on pressure. This last symptom varies from that slight shade in which the patient can hardly say whether the pressure relieves his pain or not, up to decided tenderness at the least touch. In mild cases the patient will tell you he feels very well, excepting the obstruction, but the knowledge of its existence makes him very uncomfortable. In other cases there is some degree of sickness conjoined, merely perhaps occasioned by the purgative draughts. In severe cases the sickness is more permanent, mucus or bile being rejected from the stomach. In such instances we should expect the tenderness on pressure over the bowels to be greater, though still not in any degree approaching to what occurs in peritonitis. There will also be a rumbling of flatus in the intestines, and the patient will say he feels the wind pass downwards to a certain point and then stop. All this time the pulse is not perhaps accelerated, it is generally weak; the tongue is moist and often clean; the urine, provided the obstruction is not situated high up in the bowels, is not necessarily affected, though generally high colored.

Under these circumstances, and especially in the milder cases, the first thing perhaps that you do is to order a large enema to be thrown up. It is found to traverse the large intestine easily; the patient assures you that he feels it go as far as the ilio-cœcal valve, and after a short time it returns without any tinge of fœcal matter. The obstruction is not in any part of the colon, but somewhere in the small intestine.

What treatment should then be adopted? In the severe cases, where there is pain upon pressure, distension of a portion of the intestine, a rumbling of flatus, and frequent vomiting, it will be said that the line of treatment is easily chalked out; that, whatever the cause of the obstruction, we have inflammation superadded; and that our treatment must be directed to subdue the latter. This is quite true; and in such well-marked cases I did not think there would be much chance of the case being misunderstood. But we must remember that these severe instances of the disease are only the consequences of a continuation and aggravation of the symptoms of its milder forms. We must not forget that the most simple case of obstruction is liable to run into a fatal form, if, with a view of obtaining an action of the bowels, we are incautious in the prolonged use of irritating medicines. Finding that the patient's chief discomfort arises from the fact of the bowels not acting, that he professes himself as feeling otherwise well, we are, perhaps, rather too liable to fall in with his own fancies, and just give him one more dose.

Now, in these cases what ought we to do? In the first place, abstain entirely from all purgative medicines. It will be much better to err in not giving sufficient aperients, than to err in giving too much. The first thing to do is to compose the patient's mind by informing him that there is no hurry for the bowels to act; that if he waits patiently, they will be sure to act in time; to tell him instances of persons who have gone a long time without any action of the bowels, and have done well.

Next, in these cases of obstinate obstruction I have great faith in the lancet, where it can with safety be used. It has seemed that a slight degree of faintness, produced by bloodletting, has acted very beneficially in removing the exciting causes of the obstruction, probably by the general relaxation which the faintness itself occasions. By putting the patient in an upright position and bleeding him until he begins to feel slightly faint, I think we are quite safe not to do him any harm. If he is of a weak, nervous temperament, a very few ounces will produce the desired effect. If he be strong, he will afford to lose more. Where, however, the debility of the patient forbids the use of the lancet, it will be as well to apply leeches around the umbilicus. These act, probably, by relieving the local congestion, which is either the cause or the effect of the obstruction.

These measures premised, the safest plan is, I think, to put the patient upon repeated doses of calomel and opium. Even if inflammation be totally absent, the exhibition of these two drugs is likely to be attended with the best effects. The opium soothes the bowels, already irritated by the repeated cathartics: it allays the over-excited peristaltic action: it relaxes any contingent spasm, aud quiets the patient's mind. To effect these objects, it must be administered in sufficient doses—such as gr. ½ to gr. j. every four hours. The calomel, by improving the secretions, and exciting the action of the liver, tends to remove the cause of the obstruction. And if this happen to depend upon a partial enteritis, the combined action of these two medicines would hold out the best hopes of a successful treatment. If the calomel be sufficiently guarded by opium, there is not, I think, any fear of its producing any serious irritation of the bowels.

While using these remedies I should be in no hurry to accelerate the action of the bowels by aperients. I should rather wait until they begin to act of themselves, as they generally will; and then, provided no inflammatory symptoms were present, there would be no ob-

jection to administer a dose of castor oil to aid their propulsive efforts. In these cases it is also better to delay the administration of aperient enemata until the bowels are acting themselves. Previously to this they appear to add rather to the patient's discomfort, probably by the distention they occasion in the large intestine, which re-acts upon the parts already distended by the obstruction.

When there is no tendency to sickness, it is better to allow the patient to take food, in the shape of gruel, by the mouth. It prevents that sense of sinking which he often experiences, and it probably acts in some degree mechanically in propelling the contents of the intestinal tube.

In those severe cases, where there is frequent sickness, with pain in the bowels, and a rumbling of flatus, the above measures will be still further indicated. But there will also be other things which it will then be necessary to attend to. In these cases it is of great importance to abstain from giving any food by the mouth for some days. A teaspoonful of cold water should be put into the mouth from time to time to allay the patient's thirst. His support should be entirely entrusted to beef tea injections. It is proved that these are sufficient to maintain the strength for some time—at any rate, for a period sufficient to allay the irritating symptoms, which forbid the exhibition of food by the mouth. This part of the treatment I am inclined to consider of the highest importance; for as long as food is continued to be administered by the mouth, and is rejected by vomiting, there will be little chance of arresting the inversion of the peristaltic action of the intestinal tube. The nutritive enemata should be of small bulk, not exceeding at the outside a quarter of a pint; otherwise, they will not only be retained, but they will add to the patient's sufferings. They should be administered at regular intervals of four hours. When there is much rumbling of the intestines, or when there is a difficulty as to the retention of the injections, it is advisable to add to them a certain proportion of laudanum.—*Lon. Med. Gaz.*

ART. II.—*The Pulse.* By Dr. R. B. TODD, F.R.S.

[In a clinical lecture on this subject, Dr. Todd says:]

The frequency of the pulse is affected by various morbid influences, of which the following are the most potent:—

1. *The condition of the blood.*—A poor blood is almost always associated with a rapid pulse; in animals bled to death the pulse at-

tains an increasing frequency as the blood flows; this occurs in men who have been very largely bled, and in cases of excessive hemorrhage, whether hæmoptysis, epistaxis, or hæmatemesis, or after surgical operations, the pulse attains great rapidity.

2. *The existence of a poison in the blood.*—This tends generally to increase the frequency of the pulse, and so you find the pulse quick in the early periods of the exanthemata of typhus. The administration of alcohol to a healthy man affords a good illustration of this; as soon as he has taken a certain quantity of it, acceleration of the pulse takes place. But some poisons will produce a contrary effect, by depressing and weakening the heart's action, as you well know in the administration of digitalis, or of hydrocyanic acid. So, also, some of the animal poisons, if taken in large doses, will cause depression of the heart's action and a slow pulse. We have now a case of scarlet fever, in a man named Boon, in Rose Ward, with whom the pulse was as low as 60 before the eruption had come out fully; a state which seemed to me to indicate the use of stimulants, and under their administration the heart's action increased in force and frequency, and the patient did well.

3. *The state of the nervous system exercises a very remarkable influence upon the rate of frequency of the pulse.*—It is one of the features of the hysterical diathesis, that the pulse, always quick, becomes accelerated under the slightest disturbance, physical or mental. Cerebral lesion sometimes causes a very depressed state of pulse; as, for example, inflammation of the brain, vomiting, pain in the head, and sluggishness of pulse, are symptoms which should always awaken the anxiety of the practitioner, as regards the state of the brain. In many instances of injury to the head, concussion, fracture with depression, the pulse becomes notably retarded until the compression of the brain has been removed. So also in many cases of apoplexy, the pulse is sluggish, and the heart seems oppressed.

Of intermitting pulse.—Among the most interesting modifications of pulse, which we meet with in practice, is that which arises from impairment of the rhythm of the pulse, or what is called the *intermitting pulse.*

The most common form of intermitting pulse, is that in which the phenomenon of intermission results from the prolongation of the natural period of rest in the series of changes which constitute the heart's

rhythm. The heart's rhythm consists of a regular succession of first sound, second sound, rest,—first sound, second sound, rest,—and so on. Now in an intermittent pulse this rest is unnaturally long,—the first sound of one beat succeeds the second of the previous beat, but after too long a pause. Sometimes the intermissions are very regular, occurring after every fourth or every third beat; sometimes perfectly irregular, at one time after every one or two beats, at another every thirty or forty.

Now what are the indications of this form of intermittent pulse? Is it indicative of organic disease? I think I may state positively that an intermittent pulse of itself affords no indication of organic disease of the heart. The phenomenon of intermission is due to some disturbance of the local nervous influence, upon which, probably, the rhythmical character of the heart's action depends. Nor are we justified in pronouncing unfavorably of a patient because he has an intermittent pulse. You will meet with many persons who will tell you that they have had intermitting pulse nearly all their lives. Take a man in his ordinary health, and discharging his usual avocations,—for example, a medical student,—and suppose this intermittent pulse to be his only notable symptom, then you may set it down, without any hesitation, that there is no organic disease,—neither valvular lesion, nor any organic change in the healthy condition of the heart in any other respect.

But undoubtedly this form of intermitting pulse denotes a derangement of the heart's action of a sympathetic nature, and almost invariably in sympathy with the state of digestion. This kind of pulse is of very common occurrence in men who work hard, neglect exercise, are irregular as to meals, and sit up late at night. It is also very common, and doubtless from the same cause, in gouty men. Intermitting pulse is not uncommonly a precursor of a paroxysm of gout. Certain ingesta are very apt in some people to cause intermission of the pulse. Tea, for example, especially green tea, is one of these: ices, more particularly cream ices, will do the same. So, also, certain medicines,—as digitalis and colchicum.

Of all the causes of intermitting pulse in persons of middle age, or upwards, and in the middle or higher classes of society, I think you will find the gouty state the most common. The *materies morbi* of gout acts upon the nervous system of the heart much in the same

way as the principle of green tea or of digitalis would do, and gives rise to the disturbance which deranges the heart's rhythm: hence in the treatment of these cases, you must endeavor to purify the blood, by regulating the diet and by promoting the excretions, in such a manner as will not debilitate your patient.

I have stated that the intermittent pulse is not a necessary indication of organic disease of the heart. It is a curious fact, which is in some measure confirmatory of this remark, that of the various forms of disease to which the heart is subject, intermitting pulse is not of very frequent occurrence with any, nor is it constant to any particular form.

If there is one state of cardiac disease with which it is more frequently associated than with another, I should say it was disease of the mitral valve accompanied by weakness of the muscular fibre of the heart. But a large number of cases of mitral disease will occur without it to one with it; and, therefore, this occasional association gives it no value as an indication. The intermittent pulse depends upon some interference with the healthy nutrition of the muscular system of the heart; and hence you get it so frequently in bad states of the blood,—as in dyspepsia, gout, rheumatism.

You may gather, from what I have stated more than once in the preceding part of this lecture, that there is another form of intermitting pulse besides that to which I have alluded. The characteristic feature of this form is, that the intermission of the pulse does not result from the intermission of the heart's *rhythm*, but from irregularity in the *strength* of the heart's systolic contractions. The heart may never intermit, and yet the pulse may; or, in other words, the intervals between the beats of the pulse may vary considerably in duration. This form of intermitting pulse sometimes occurs alone, sometimes simultaneously with that in which the heart's rhythm is deranged. When it occurs in the progress of an acute disease, as of fever, erysipelas, &c., it must be looked upon as a sign foreboding the worst results. I apprehend that it is this form of intermitting pulse which most commonly accompanies fatty disease of the heart; and, on the whole, in all states of disease, both acute and chronic, it is that form from which we may augur least favorably for the patient.

Posture influences these two forms of intermittent pulse differently. The first form, or that which depends on a prolongation of the natural

period of rest in the heart's rhythm, is diminished by the erect posture, and the heart becomes more regular in its rhythm. On the other hand, the erect posture increases the number of intermissions in the second form by embarrassing the heart's action in the way which I have already described.

[In considering the means best adapted to keep down the frequency of the pulse, we may employ either direct means, acting at once upon the heart, or indirect or general means.]

Of the direct means the administration of *digitalis*, or of *opium*, is the most important. You may give digitalis as a diuretic, or with a view to obtain its specific action in reducing the frequency of the heart's action. Given with this latter view it must be administered with due regard to a correct diagnosis, for while it is a very valuable remedy in one case it is a dangerous one in another. I would lay it down as a rule, that in all cases where there is regurgitative valvular disease, but especially aortic, digitalis given in doses which will depress the heart's action is a dangerous medicine; it weakens the heart, and thereby increases the embarrassment under which it already labors; it was for this reason I would not give digitalis in the case of Loveland. In his case, the stream of blood flowing into the auricle meets the blood regurgitating from the ventricle, and the blood flowing into the ventricle has to encounter an obstacle from blood regurgitating into it through the aortic orifice. It will not do to depress a heart laboring under such a derangement as this; therefore the only way in which you can quiet the heart's action in such a case as this is to employ some other medicine, which operates upon the heart through its tranquilizing influence upon the nervous system, and so quiets the heart without weakening it. Now, opium is such a medicine, and therefore it is more generally applicable to heart affections than digitalis. The diuretic properties of digitalis may be often called into play in cases of cardiac disease; and for that purpose you may often combine it with a stimulant, as ammonia, or with some preparation of iron, so as to counteract the depressing effects. But the best combination, for a diuretic purpose, is with blue pill and squill, after a formula attributed to the late Dr. Baillie. I have seen, under the use of this combination, considerable dropsy disappear, and the heart become disembarrassed in its action in the most remarkable manner. And it would be impossible to say that the beneficial in-

fluence was due to one of the drugs more than to another: it is the combination of the three drugs which many times acts so disadvantageously.

But then there are certain other *indirect* means of acting on the heart, as purgatives, which diminish the quantity of the blood without impoverishing it; or steel, which improves the condition of the blood already poor; rest, the recumbent position, a nutritious and moderate diet, mental quiet. It is generally from the efficacy of some of these remedies, especially the three or four last, that heart cases often experienced a marked alleviation of all their symptoms on their first entering the hospital.—*Med. Gaz., in Braithwaite's Retrospect.*

ART. III.—*Effects produced upon the Stomach by Grief.* By Dr. GRAVES.

[The following cases exemplify the effects of nervous agitation first upon the functions, and afterwards upon the textures, of certain organs:]

The first case was that of a young lady, residing in Camden street, who was frightened at night by a sudden fire, which threatened to destroy the house in which she lived. During the moments of danger she got a pain in the stomach, which recurred frequently for several months, and finally was succeeded by symptoms of ulceration in that organ, from which, nevertheless, she unexpectedly recovered. Several years afterwards she died of another disease. The body was examined by Dr. Ireland and myself, when we discovered that a very large ulcer had existed in her stomach, which had afterwards healed, but which, in the first instance, was prevented from discharging the contents of the stomach into the abdominal cavity by adhesion with one of the neighboring viscera, caused by effused lymph.

The second case was that of a young and healthy lady, over whose shoulder a musket was suddenly discharged in frolic by an inebriated man. She fell down in a fit of hysteria from the fright, became subject to violent palpitations of the heart, and died in the course of some years, laboring under the effects of general dropsy, produced by heart complaint. I examined her body, and found great enlargement of the heart, and various organic changes in the valves.

I have lately seen a case analogous to this, and which exemplifies,

in a manner equally striking, the effects of the mind on the body. A grocer, of very healthy constitution and full habit, became suddenly involved in pecuniary difficulties, having, in consequence of railway speculations in 1847, lost a large sum of money, and not been able to meet his engagements. He experienced, from having been perfectly healthy, a total disappearance of appetite and a loss of sleep, which afflicted him for several weeks. His appetite he scarcely at all recovered; he became emaciated and at times feverish. But after a few months he began to feel transient pains in his stomach, together with a sensation as if something was turning or moving in it. These pains latterly became more frequent, and the progress of the disease uninterrupted, exhibiting in its course all the symptoms of organic disease of the stomach. It is now two years since it commenced, and large tumors are to be felt in the neighborhood around the pyloric orifice of the organ. The tumors are hard and scirrhous; he is emaciated to the last degree, and his case is evidently hopeless. *Dublin Quar. Journal, Feb.* 1851, *in Braithwaite's Retrospect.*

SURGERY.

ART. IV.— *Practical Rules on the Suppression of Arterial Hemorrhage.* By PROFESSOR SYME.

In the first place, you should hold it established, that it is always desirable, if possible, to arrest bleeding from arteries by means applied at the seat of injury. Secondly, you may be assured that bleeding at and below the wrist, and at and below the ankle, is always under the control of pressure, provided it be properly employed,—that is, not superficially, but from lint, or some other suitable substance being introduced into the wound, and made to press directly upon the orifice of the vessel. Thirdly, in wounds of all arteries, accessible between the limits just mentioned and the heart, the vessel should be exposed at the seat of injury, and tied on both sides of the wound it has sustained. This principle has been so loudly maintained by Mr. Guthrie, that I believe some people have given him the credit of its origin; but it has been long established as a sound principle of practice by surgeons of the highest eminence both at home and abroad, and more especially by Mr. John Bell, of Edinburgh, in whose 'Principles of Surgery' you will find many graphic

and impressive lessons of the effects resulting from attention to it, and also from its regard.

One evening I received a message from the Northern Railway, that there was a steamboat waiting at Granton to carry me across the Firth to Burntisland, where a special train would be ready to proceed onwards, but whither, or for what purpose, there was no information. Having traveled a considerable distance, I met several practitioners, of great experience and intelligence, who were suffering much anxiety in regard to a youth, in whose forearm an incision for an abscess had bled profusely. As it was quite away from the radial artery, the ulnar was concluded to be the source of hemorrhage, and had been sought for by dissection upwards towards the elbow, along the course of the muscles, between which it is wont to run, but without success; and, as the patient seemed little able to bear any further loss of blood, it was deemed desirable to have a consultation as to the most efficient measure of relief, even though it might involve ligature of the humeral artery, or removal of the limb. Acting upon the principle above mentioned, I scratched away the clot at the bleeding point, from which a copious stream instantly issued, but arresting this with my thumb, pressure being at the same time made upon the humeral, I dissected a little through the adjacent texture, and brought into view a large artery, under which a double ligature was passed, and tied on both sides of an aperture distinctly visible in its coats. In less time than I have taken to describe the process, the patient was thus transferred from a state of extreme danger to one of perfect safety. The artery was obviously the ulnar, which had come off higher than usual from the humeral, and pursued an irregular course externally to the fascia of the forearm, thus explaining how it had been wounded by the superficial incision, and how it had escaped the deep dissection.

The fourth rule I have to offer is, that when an aneurism forms after the wound of an artery, the same means should be employed as in the first instance, unless the vessel concerned be of a large size, and admits of having a ligature applied to it, without the intervention of any large branch between the seat of obstruction and the wound. The formerly not uncommon case of aneurism at the bend of the arm, as a consequence of the humeral artery being wounded in venesection, affords a good illustration of the advantage resulting from attention to this rule, since relief was thus afforded much more easily, safely, and securely, than by ligature of the humeral further up the arm.

To illustrate the exception mentioned, I may relate the case of a young man who, in one of the most remote of the Orkney Islands, accidentally thrust the blade of a knife into the middle of his thigh, so as to wound the femoral artery. The blood gushed forth with great violence, but was restrained by a compress, formed of eight half-crowns, wrapped in a piece of cloth. The wound healed, and an aneurism soon afterwards appearing, he was sent here to my care. Respect for the general principle, and suspicion from the purring sound, that there was a communication between the artery and vein, suggested considerations which were opposed to ligature of the femoral, but I nevertheless preferred this operation, as the ligature could be applied without the intervention of any considerable branch; and I accordingly performed it, with the happiest result.

The following case will show the danger of not strictly limiting exceptions to the rule within the limits which have been mentioned. A middle aged woman, in a country town, while walking up a steep and slippery ascent, and carrying a knife, with which she had just killed a pig, fell, and thrust the sharp point of the blade completely through her leg, a little below the knee, entering between the tibia and fibula, and issuing at the lower part of the popliteal space. Blood gushed from both openings, but when she was laid in bed ceased, and did not return. At the end of a fortnight, the wounds having healed, she attempted to walk, and found that a swelling had taken place at the seat of injury, on account of which, by the advice of her medical attendant, she came here to be under my care. On examination, I found a large pulsating tumor in the forepart of the leg, immediately below the knee, and another of equal size in the popliteal cavity.

Feeling unable to determine whether the anterior or posterior tibial, or the popliteal artery itself, was the vessel wounded, and, on the whole, being inclined to think that the one last mentioned was most probably concerned, in which case ligature of the femoral would be the proper course, I adopted this measure. No bad consequences followed the operation, the tumors ceased to pulsate, and favorable expectations were entertained of the result for two or three weeks, when the anterior wound below the knee opened and bled profusely. I dilated it freely, evacuated the cavity of its fluid and coagulated contents, and applied firm pressure between the tibia and fibula, whence the blood was found to issue. Mortification followed, and I performed amputation, without saving the patient's life. There can be no doubt that, in this case, if the true state of matters could have

been ascertained, and a ligature applied to the anterior tibial, which was divided just before it passed through the interosseous ligament, both the limb and life of the patient would have been preserved.—*Monthly Journal of Med. Science.*

PART FOURTH.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

Operative Surgery, based on Normal and Pathological Anatomy. By J. F. Malgaigne, Professor Agrege de la Faculte de Medecine de Paris, etc. etc. Translated from the French, by Frederick Britton, A.B., M.D., &c. &c. Illustrated by wood engravings. 8vo. pp. 565. Philadelphia: Blanchard & Lea. 1851.

Although the work above announced has been for more than ten years familiar to the European profession, it has never been translated into the English language until quite recently. This is a matter of surprise, since, from the wide-spread reputation of the author and the scientific and authentic character of the work, it has been translated into no less than five European languages.

To afford the reader a general idea of the plan of the work, we might state, that it is divided into three grand divisions or parts. After the preface, which gives a concise historical notice of operative Surgery, we have, at the head of Part I, General Elements of Operations, or elementary operations; which include incisions, dissections, caustics, means of preventing hemorrhage, &c. &c. Part II, illustrates the operations, &c., which come, first, under the head of Minor Surgery; then such as operations on the skin, teeth, abscesses, tumors; autoplashy on the veins, arteries, articulations, with many that cannot be enumerated. This part closes with amputations.

Part III, takes up special operations, and describes all those usually performed on the eye and its appendages; on the ear, nose, mouth, throat, air-passages, thorax, abdomen, rectum, and genito-urinary organs, both in the male and female. The arrangement of the subjects is exceedingly systematic, and the descriptions of the

methods and various procedures, clear, concise, and complete. In a word, the work is, within reasonable and *readable* limits, a complete cyclopædia of operative surgery. We regret to say, we have a single objection to it; and even *ours* may not be an objection in the eyes of another living surgeon—it *may* be to him a decided merit. But we do dislike the habit into which all French writers fall, that of describing, in operative surgery, the *method* of every man that ever lived and figured in this department of our profession. Life is too short and time too precious, to be encumbered with the reading descriptions of an endless variety of impracticable operations that never did succeed, and, from the nature of things, never can. As an illustration of this peculiarity in French operative surgery, we would point the reader to the treatment of fistula lachrymalis, in the work before us, where there is no less than *fifteen different methods* particularly described. Such a multiplicity of operations tends to *lumber* the mind and confuse the memory of the student, who is obliged to wade through such a chaos of nonsense to secure a few valuable directions.

For the author, M. Malgaigne, we indulge an exalted opinion. From personal observation, we know him to be one of the ablest surgeons of Paris. He is learned, bold, and indefatigable. He is a man of genius. Although not loved by his professional brethren, by his talents and surgical exploits, he makes himself feared and respected. He is abundantly competent to produce a work on operative surgery, which shall be a standard authority for many years to come. He has done it. The work is before us, and, in terms of high commendation, we ask for it a cordial reception.

Sold by Huntington & Mac Intire.

The Elements of Materia Medica and Therapeutics. By Jonathan Pereira, M.D., F. R. S. & L. S. Third American Edition, enlarged and improved by the Author; including Notices of most of the Medicinal Substances in use in the civilized world. Edited by Joseph Carson, M.D., Professor of Materia Medica, &c. in the University of Pennsylvania, &c. &c. Vol. I. 8vo. pp. 838. Philadelphia: Lea & Blanchard. 1852.

The medical profession throughout our country will rejoice to see an announcement of the above work. We are confident that we give

utterance to no more than public sentiment when we say, that there is none in the English language, in that department of medical science of which it treats, that can bear a comparison to Pereira's Materia Medica and Therapeutics. Like its able and justly celebrated author, the work is ***solid, authentic, scientific,*** and *complete.* American physicians have been, and are still, much in the habit of relying upon Wood and Bache's U. S. Dispensatory, as the only book of reference on Materia Medica and Therapeutics. Although, as a Dispensatory, it is a truly national work, and deserves, as such, high commendation; yet, it has its defects and blemishes, and, as far as therapeutics is concerned, it is, to say the least, inferior to its reputation.

Dr. Pereira states, in his preface to this third American edition, that he has "embodied all recent discoveries of importance which relate to the subjects treated of in this work." He "trusts, therefore, that his professional brethren in America will find this edition superior to its predecessor, and more deserving of their approbation." Every ambitious physician, who is determined to be up with the improvements of the day, will add this work to his library.

For sale by Huntington & Mac Intire.

Outlines of Chemistry. For the use of Students. By WILLIAM GREGORY, M.D., Professor of Chemistry in the University of Edinburgh. First American from the second London edition, revised, corrected, and enlarged. By J. MILTON SANDERS, M.D., LL.D., Professor of Chemistry, &c. in the Eclectic Medical Institute of Cincinnati. 12mo. pp. 614. Cincinnati: H. W. Derby & Co. 1851.

We doubt not that this is a good work; it is certainly from the pen of an able and well known chemist. Our want of familiarity with the details of this science, forbids our speaking particularly as to its merits, but we belive it to be a safe guide to the student in the study of chemistry. There are, however, four great subjects, usually treated of in other similar works, which are entirely omitted in that of Dr. Gregory. These are, Heat, Light, Electricity, and Magnetism, or what are denominated Imponderables. This omission is, probably, not a defect. Their consideration belongs more especially to the department of Natural Philosophy, and should come under the head of Physics.

The American Editor informs us, in his preface, that "he has willingly undertaken to edit the work, at the flattering request of Prof. Gregory, and has added such notes as the late progress of the science requires." Now we are of the opinion, though we may be mistaken, that if said Professor Gregory had known that J. Milton Sanders, M.D., LL.D., were a professor of chemistry in "the Eclectic Medical Institute of Cincinnati," a Quack School of the most notorious and offensive character, he would not have made this "flattering request," notwithstanding his extraordinary titles. We would not say, that Dr. Gregory's work has fallen into bad hands, (whether bad or good, however, the editor's hands have had but little to do with its enlargement,) for we know nothing personally of the American editor, but we *do* say, that it has fallen into the hands of a man who is in bad company; and so long as the maxim, "a man is known by the company he keeps," is recognized and observed by the world, we fear the work, and the reputation of its author, will suffer from the position of its American literary usher. Nevertheless, for its own sake, we commend the work to students of chemistry.

Medical Lexicon. A Dictionary of Medical Science: Containing a concise explanation of the various subjects and terms of Physiology, Pathology, Hygiene, Therapeutics, Pharmacology, Obstetrics, Medical Jurisprudence, &c., with the French and other Synonymes; notices of climate and of celebrated Mineral Waters; Formulæ for various officinal, empirical, and dietetic Preparations, etc. By Roblay Dunglison, M.D., Professor of the Institutes of Medicine, etc. in Jefferson Medical College, Philadelphia. Eighth edition, revised and greatly enlarged. 8vo. pp. 927. Philadelphia: Blanchard & Lea. 1851.

It is unnecessary to say any thing to the medical profession in commendation of the above work. We know of no man better qualified to prepare a Medical Dictionary than Prof. Dunglison. It is not a matter of surprise, then, that his Dictionary should be what it really is, the best one in the English language. It comes from the teeming press of Blanchard & Lea, who seldom publish inferior works, and never superior works in an inferior manner, and may be found at the Book Store of Huntington & Mac Intire.

The Pocket Formulary, and Synopsis of the British and Foreign Pharmacopœias: Comprising standard and approved Formulæ for the Preparations and Compounds employed in Medical Practice. By HENRY BEASLEY. First American from the last London edition, corrected, improved, and enlarged. 12mo. pp. 443. Philadelphia: Lindsay & Blakiston. 1852.

From the examination we have given this work, we feel justified in recommending it as one of the most complete Formularies in the English language. It is much more convenient and extensive than that contained in the Dispensatory of the United States. The physician who compounds his own medicines, and the druggist, will find it of very essential service in the execution of pharmaceutical preparations. It is published by Lindsay & Blakiston, and sold by Huntington & Mac Intire.

Lectures on Scarlet Fever. By CASPAR MORRIS, M.D., &c. &c. 8vo. pp. 104. Philadelphia: Lindsay & Blakiston. 1851.

The above lectures were originally published in the Medical Examiner, and have been read with a high degree of interest by the readers of that Journal. We are happy to see them placed in the hands of the profession in a more permanent form. Dr. Morris, the author, is one of the most intelligent and respectable physicians of Philadelphia. Having been engaged in an extensive practice for twenty-five years, connected most of the time with several extensive charities, and withal an elegant writer, he is abundantly competent to write an interesting and authoritative work upon this disease. Prevalent and fatal as this affection frequently is, sweeping off a large number of the most interesting portion of our population, such a work as the one before us is *needed*, and we bespeak for it a wide circulation.

For sale by Huntington & Mac Intire.

Braithwaite's Retrospect of Medicine and Surgery.—Part XXIII of this invaluable *Resume'* is before us. To the physician and surgeon, who design to practice their profession scientifically and upon the most approved principles, and who intend to take advantage of

the latest and most valuable improvements, this work is a desideratum. It has an extensive circulation, and is patronized by the leading members of our profession in both hemispheres.

Messrs. Stringer & Townsend, of New York, the new publishers and proprietors, in conjunction with the editor, are making still greater improvements in the work. It is enlarged and improved in its paper and mechanical execution. They advertise back numbers at reduced prices; and for two dollars a year, they propose to send the "Retrospect," free of postage. Its merits are so generally known, that it is quite useless to say more in its praise.

PART FIFTH.

EDITORIAL AND MISCELLANY.

"HINTS TO THE PEOPLE UPON THE PROFESSION OF MEDICINE."—We have just completed the perusal of a little book, of sixty-seven pages, with the foregoing title, written by Wm. Maxwell Wood, M. D., Surgeon of the United States Navy, and published by Geo. H. Derby & Co. of Buffalo. It is desired and intended that this little work shall be widely circulated, both in and out of the profession, and that its contents shall exert a salutary influence, particularly upon the mind of the non-professional reader. With this object in view, the author has couched it in popular style, and we are requested to give it such a notice as its merits demand.

We know not when we have read a work of more thrilling interest. In calling the attention of our readers to it, we might, with propriety, say that the great subjects discussed, are the condition, the objects and the labors of the medical profession;—the existence of Quackery, its causes, evil tendencies, and its remedy. These subjects embrace a wide field and afford ample scope for the elaboration of an immense volume, but such is the power of the author's language and the conciseness of his style, that he has brought them all vividly before the mind within a small compass, by facts and arguments that *tell* upon every page. We do not remember to have read from the

pen of any devotee, so beautiful a tribute to the medical profession as will be found commencing on the sixth page. Adverting to what the profession has done and is doing, the author says of the educated physician, that "he sees it in the various divisions, and vast arrangements spread out over the civilized world, and acting with all the power which can be derived from an aggregation of the highest order of intellect, disciplined and strengthened to the utmost for its work. In every one of the various departments of his profession, the medical student sees, not one only, but a collection of names designating individuals whose mental power demands the admiration of all who can appreciate their labors,—labors to which nothing short of the greatest intellectual strength is adequate. Follow, then, the eye of this student, as it sweeps over the cities of his own country, of England, France, Germany, Egypt, Prussia, and Turkey, and see with him the several divisions of the profession, studying man in health and disease, from the microscopic elementary atom of each organ, up to his full development and arrangement in families, tribes, and nations.

"Medical chemists, day and night, amid the machinery of their laboratories, are hunting nature in her hidden recesses, and exposing the principles and laws of combination. Medical microscopists are finding beauty of form and structure, where the naked eye sees not at all, or sees only a confused speck, and they are developing systems as wonderful in their minuteness, as that of astronomy in its magnitude. The anatomist, the physiologist, the pathologist, concentrating all their powers and observations upon the various subdivisions of these extensive sciences; the medical statistician, estimating the influence upon health and life of social and political conditions; of occupations; of population; of concentration in towns or diffusion in the country; the medical psychologist, studying the health and morbid manifestations of mind. Look, too, over distant parts of the globe, and see the medical corps of armies and navies adding to the common stock, their observations upon climates, the habits, diseases and remedies of different nations. Specially devoted to such observations and inquiries is the medical traveler, of whom the stationary practitioner may say, he

> "'Sucks intelligence in every clime,
> And spreads the honey of his deep research
> At his return—a rich repast for me.'"

Alluding to the literature of the profession, he says:—

"All these various fountains of knowledge are irrigating the whole

profession by the channels of the medical press, and bearing to its humblest and most remote member whatever of fact, truth, and wisdom has been found worth the freighting. In the various modern languages we have, going forth, periodicals upon the profession in general, or upon branches of it. Most of these journals are in charge of men of eminent literary and professional ability, and any one number of either of the leading journals presents a specimen of intellectual ability of which not the profession only, but human nature may well be proud. Opening by chance one now lying on the table, we find thirty-two periodicals—English, French, German, American, on its exchange list for the quarter. To present an idea of the scope of such journals, we find a single chance number to contain thirteen analytical and critical reviews of works in German, French, Italian, and English, the works being generally by the most distinguished medical authors of their respective countries. Then, besides medical reports, memoirs, and cases, we have, in the same number, fifteen bibliographical notices of works upon chemistry, diseases, anatomy, social problems, and natural theology; each notice being an interesting synopsis of the work.

"Could all see the profession of medicine even in the dim and feeble light by which we have endeavored to show its broad and comprehensive operations, the mind which could charge upon such a profession limited, selfish, and interested motives, opposed to truth, would only manifest its own incompetency to understand the nature and tendency of mental action."

Again, respecting its contributions to other sciences, he truthfully declares that, "whilst the profession of medicine is thus working in the main business of its vocation, it casts rich contributions upon subordinate and collateral sciences. To these sciences and their contributions the popular mind gives its admiration, and does not see that they are but chance jewels dug up on the way to the great mine. Look at Comparative Anatomy and Chemistry, Botany and Zoology, Geology and Mineralogy, and, in the words of a distinguished medical writer, 'strip these sciences of what has been contributed to them by physicians, or by those who have had the discipline of a medical education, and a chasm is left which it would be difficult to fill.'"

In hot pursuit as the world is, after the various dogmas in theory and exclusive systems in the practice of medicine, nothing can be more opportune, and at the same time nothing more forcible, than the author's remarks upon systems in medicine.

"The word 'system,'" he says, "as applied to any medical dogma, theory, or scheme, on the one hand, and to the science of medicine on the other, naturally suggests the idea that the science of medicine is limited to some other and opposing dogma, or theory, to maintain which all its energies are directed. Hence, the advocates of any peculiar dogma are fond of using the terms—new system and old system—new school and old school—and by the acknowledgment of such distinctions, a whole train of error is founded. From what has already been said, the impropriety of such an application of terms, it is thought, must be apparent. A science which seeks for truth cannot be limited by any system, but must pick up truth how and where it can; hence, that of medicine, in its very nature, repudiates systems.

"'In the present state of medical science, we feel well assured that the only true system is the absence of all systems. No premature attempt to generalize can have more than a temporary success. Be it ours to seek for light wherever it shall break in; to amass knowledge, even if we have to pick it from the mire; to draw wisdom from the errors and follies of our rivals, without disdaining to profit by their success;' and then, 'other systems will pass away, ours will be permanent; nourished, indeed, to some extent, by the very elements which come from their decay, as the eternal oak flourishes and grows green for ages from the decomposition of the transient vegetation, of which generations are springing up and perishing around it.'"

"Many of the theories and systems in medicine have been splendid monuments of the power and wealth of the human mind; but as the rich materials of their creation lie scattered in ruin, they emblem the fallibility of the most exalted human intellect, and show that no genius can dare to leave the foundation of fact and truth, and yet hope to erect a firm and enduring structure. The science of medicine sits in judgment upon them all, and examines the claim of each in calm and philosophic impartiality, but refuses to any the privilege of fastening its link upon the chain of established law, until it presents that link in all the unyielding firmness and crystal transparency of truth.

"The science of medicine, then, by its very nature, by the principles which govern the human mind, by every stimulus of interest and ambition, can limit itself to nothing short of attainable truth, and it cannot be limited by, or bound to any system. In the science of

medicine there can be no 'old school' or 'new school,' and the use of such terms creates a false impression, and misleads the popular judgment in regard to any scheme or pretension which aspires to independence of the profession of medicine." * * * "If any system or scheme sets itself above that professional investigation which is bound to seek for truth, and claims to be a new school or system, the claim and the pretension are alone proof that it is not true. If it contains any grain of truth, according to the laws which mind must obey, that single grain must be found and added to the store of general medical science. It is no argument to say that any 'new school' system or sect has its colleges, hospitals, and journals, independent of general medicine. If such is the case, it only proves that the disciples of such an arrangement have shut themselves within a narrow circle, and prohibited themselves from the broad search for truth, wherever it may be found; they have bound themselves to a one-man dogma, to a system, and not to a science. As well might theology be taught by schools of Swedenborgianism and Mormonism; and if they become schools of general science and theology, they cease, of course, to be a sect."

We regret we have not space to quote more at length from this portion of the work, wherein the author most clearly shows the impropriety and ridiculousness of receiving any new system, because many persons sustaining a respectable position in society have adopted it. He summarily disposes of those persons in the higher walks of life, who lend their influence to the support of empiricism, in the following language:

"When any individual, representing a respectable station in society, is asked to give his name to the support of quackery, or novel and peculiar systems, let him remember that while he may be flattered by his importance in the eyes of charlatans, quacks, and pretenders, science smiles in pity and contempt, to see him registering his name among the long list of those who have certified to their own ignorance, vanity and folly."

The author next devotes a few pages to the consideration of medical delusions, and shows that those so prevalent and successful at the present day, have parallels in the past. That the notoriety of Mantacino, about whom "all France was once mad;" that Cagliostro, who succeeded in deluding and drawing Queens and Princes, and nearly the whole continent of Europe, after him; that Mrs. Mopps, or "Crazy Sally," who "ruled the popular mind of England, patri-

cian and plebeian"—were as notorious, and were received and patronized with as much eclat and enthusiasm, as are Messrs. Samuel Thompson, Hahnemann, and Preisnitz.

The proverb, "Doctors differ," is taken up and discussed upon philosophical principles; but we have not space to quote nor enlarge upon this point. And here, with a general and impressive commendation of the work before us to the favorable consideration of the profession and the people, we should be glad to lay down our pen. *We cannot do this with an approving conscience.* The perusal of the work, up to the fortieth page, has afforded us unmitigated pleasure and delight. To us it has proved a rich intellectual repast. It abounds in arguments, logical, clear, and cogent. He who reads thus far, it matters not to what profession he belongs, can but see, in his mind's eye, the profession of medicine, like the king of day, ascending the eastern skies, rising higher and higher, and still higher in the firmament of letters, and taking a lofty position among the imperishable instrumentalities, originally the gift of God, for the relief of suffering humanity and the exaltation of man's physical and moral condition. We said it afforded us a rich intellectual repast, and so it did; but, as the *cuisiniere* places delicately prepared dishes of arsenic, corrosive sublimate and henbane among the viands, smoking vegetables and sweet-meats, under which the table groans; so the author has mingled with his convincing arguments and richly-deserved panegyrics, *falsehood* and *slander.*

The first objectionable feature of this work is found in the author's denunciations of the medical colleges of our country. He says:—"There are medical schools in the north, the south, the east, and the west, and every year sees these schools sending forth crowds of young men certified as being qualified, 'learned and skillful' in the art of healing, and this after a term of study too short to acquire thoroughly any one of the sciences, which, in the aggregate, make up the profession of medicine." * * * "Of course so long as the granting of diplomas is a mere trade, and medical schools are but shops for their sale, the multiplicity of these shops begets a competition which lowers the terms and standard so as to attract the greater number of customers; and those who should be the guardians of the profession of medicine, send forth such representatives of it, as lead to the erroneous popular opinions of the nature of the science itself."

Are these facts? Are medical colleges mere "shops" for the sale of diplomas, and the "granting of them a mere trade?" Do they

send forth annually "crowds of young men," certified to as "learned and skillful," and at the same time incompetent to discharge the duties of the profession, and a disgrace to it? It may be said, we are *interested* in defending medical colleges. Be it so. Our interest in a medical college, and our acquaintance with its economy and concerns, have afforded us opportunities to know that the author's statements in regard to them are *false*. There *may* be medical colleges which are obnoxious to this imputation; and all of them, perhaps, confer the honors of the doctorate, *occasionally*, upon an undeserving candidate. These, however, are exceptions to the general rule. To say that the courses of instruction in our colleges are as thorough as circumstances will permit, and their exactions of candidates as rigorous as the profession generally would justify, is saying no more than the truth, and what every candid, well-informed gentleman knows to be such. True, there is a rivalry between colleges, and each is desirous to secure as large a class as possible, since this is the source of its support and the measure of its success. But as a general rule, we *deny* that any but honorable means are resorted to for their successful support. We declare without fear of successful contradiction from professors or laymen, that the faculty of every college in the land bases its claims to patronage upon its thorough teachings and substantial advantages. Each school is adding annually to its means of illustration, and each professor is vieing with his compeers and competitors, to become more useful to the profession and more acceptable as a teacher. We go further, and declare that their claims are well founded, and that professional teaching is annually becoming *more thorough, more practical, and more scientific*, and that, consequently, the standard of medical education in the U. States is steadily moving onward and upward.

The next point deserving of criticism, and to which we would invite the attention of the reader, is that relating to the ignorance of the candidates for the medical profession, and of those who have recently received its honors. We cannot quote all the author's denunciations and insinuations on this subject, but will make one, as a text, about which there is no ambiguity of meaning. He remarks, on page 42, that "almost every country neighborhood sees some young man too sickly, too lazy, or perhaps too stupid to learn a mechanical pursuit, go off to study medicine, provided that, for two or three winters, he, or his friends can raise a few hundred dollars; and at the end of this time he comes back a qualified doctor, with a

diploma in his pocket. Every one knows that he was entirely deficient in that preliminary education which is the key to professional knowledge. The people soon learn to feel as much respect for the spontaneous quack of the neighborhood, as for him of college growth, or perhaps the natural shrewdness and intelligence of the former give him an advantage."

Now the author, with a retinue of Homœopathists, Hydropathists, Thompsonians, and an army of men who are ever ready to denounce the regular profession *in toto*, may chuckle over this, swing their hats, and cry, *vive* Dr. Wood; but we take the liberty to pronounce this quotation an infamous libel upon that class of young men who are about to enter, and those who have just entered the medical profession. Let us look at this a moment. We suppose there are *about* three thousand medical students in the United States. Possibly more, perhaps less. It is quite difficult perhaps to determine how many neighborhoods there are within the same boundaries; but as our learned author did not give dimensions, we will suppose that there are at least 15,000—probably four times that number, according to the popular understanding of the term employed in this manner; suppose every medical student were an *ignoramus*, would the author's declaration be true? But this is not a supposable case. We admit that there are those who are "entirely deficient in preliminary education," and that they are neither creditable candidates for our profession, nor would they be such for any other profession or avocation. They are a disgrace to our holy calling, and weigh like a millstone about its neck; but are there not dolts, and drones, and vagabonds, in every profession?—Can Divinity, Law, or Politics, boast an exemption from them? We think not. But what are the facts?—Medical students, with few exceptions, are not obnoxious to this foul imputation. *A vast majority of them are young men of talents, of moral character, and of competent education.* They are men of professional ambition, of studious habits, and they realize in a praiseworthy degree, their solemn professional responsibilities. Their advantages are more numerous and ample, and their education is more thorough than ours—the older members of the profession—were twenty years since. They are qualifying themselves not only to take our places, when we are superannuated or slumbering in our graves, but to carry the standard of education higher, and to accomplish *more good* than we, their boasting fathers and predecessors, have ever done. In support of these declarations, we ask the reader

to go back and read—on page 251—again the author's truthful remarks on the condition and literature of our profession. How is it possible that such contradictions should flow from the same pen! In one paragraph, the medical profession is represented as one of the brightest ornaments of the human race. Like the fertilizing stream, dancing down the mountain sides, and flowing noiselessly along through its verdant and tortuous valley, it imparts moisture to vegetation, a beverage to the toil-worn and thirsty traveler, and enchantment to the landscape. So medical science, through its indefatigable devotees, enriches every other department of knowledge, while it bears a healing balm to fellow-mortals tortured by disease. In the next paragraph, we have :—"Almost every country neighborhood sees some young man, too sickly, too lazy, or perhaps too stupid to learn a mechanical pursuit, go off to study medicine, provided that, for two or three winters, he, or his friends can raise a few hundred dollars, and at the end of this time he comes back a qualified doctor, with a diploma in his pocket!!" These are now the materials of which our profession is composed!!!

The next and last statement of the author, to which we demur, is one which refers to the consequences of the ignorance above adverted to. He says :

"For all this ignorance, misconception and error, a fearful retribution is visited upon the community. It pays the penalty of half its life, and consequently half its usefulness and happiness. With all the elements of health and long life in our country, statistics lead to the fearful conclusion that our average length of life is but little, if any more than half that enjoyed by overcrowded, overworked, vicious, and half-starved Europe. There, some care is taken that those to whom is entrusted the health and lives of the people, shall be qualified for their duties by suitable education."

This quotation involves a question of fact which is worthy of our regard. Is it true that "our average length of life in America is little, if at all, more than half that enjoyed by overcrowded, overworked, vicious, and half-starved Europe?" If this be true, it becomes us to inquire whether the causes are attributable to professional ignorance, quackery, and mal-practice. The comparative vital statistics of Europe and America we do not pretend fully to know, but it is our belief that the author, in *this* statement, is quite as wide of the truth as in the others, wherein he has been so exceedingly unfortunate. We can now give but one authority on this subject,

and that is the renowned Kossuth. In his great speech at Manchester, Engtand, on the 12th of November last, Kossuth states that the average length of life in Russia, according to official reports, is twenty-five years. This statement, he says, is not true. The *truth* is so revolting, that the government pertinaciously conceals it. He declares that the *real* average length of life in Russia is but *eighteen years!!* The average length of life in England is forty-six years. In New England, it is forty-six years; in the Western States of America the average length of life is thirty-five years! Now, between Dr. Wood and Kossuth, we will not pretend to decide; but from what we *know*, we are inclined to believe Kossuth is pretty nearly, and perhaps exactly, correct. Laying aside the terrible havoc upon human life produced by the American profession, whose ranks are kept full by those who are "too sickly, too lazy, or too stupid to learn a mechanical pursuit," we have no hesitation in saying, that nearly all the circumstances influencing the health of Americans and Europeans, are decidedly in favor of greater longevity in the latter. Europe possesses a mild, equable, and salubrious climate. Atmospheric vicissitudes are few; the thermometrical and barometrical changes are far from being frequent or excessive. The whole continent, as well as England, is under the highest state of cultivation—sewerage and drainage being so extensive and complete, that there is scarcely a locality from which emanate miasmatic exhalations. The most rigorous sanitary regulations prevail in town and country everywhere, and the doors of ten thousand charities are ever open to receive the destitute and sick poor. Is this the case in our country? Almost the opposite prevails. We have every possible variation of climate. *Vicissitude* is characteristic of every season. The winters of New England are as rigorous as those of the polar regions, and their summers are characterized by intense heat. These extremes prove exciting causes of the most alarming pulmonary affections, from the higest grades of acute inflammation to those wherein tubercular deposit fatally invades the citadel of life. In the great valley of the Mississippi, in addition to these vicissitudes, we have from the surface of our fertile country constant and abundant miasmatic exhalations, that, inhaled and received into the system, poison the blood, derange the secretions, impair the vigor of the constitution, and generate a retinue of diseases, whose prevalence and malignity are known only to the western emigrant and him who is called upon to treat them. Besides these, our people very generally live in in-

convenient, uncomfortable and badly ventilated houses. Their clothing is frequently anything but suitable to their necessities, and food is variable in quality, and often taken in quantities quite regardless of the wants of the system or the powers of digestion. We might, had we space, enumerate a great variety of circumstances and morbid agents, which extensively prevail in our country, that tend most powerfully to reduce the average length of life of the American people. We think we have said enough to prove, 1st, That life is nearly or quite as long in America as in Europe; 2d, That if that of the former falls in the least below that of the latter, (which we seriously doubt,) the causes are climatic and such as are connected with imperfect domestic economy, and, necessarily, irregular habits.

Respecting the comparative skill possessed and exercised by the European and American profession, we have no definite facts by which to determine. It is true that medical education is conducted more systematically, medical pupilage embraces a longer period, and the *curriculum* of studies, perhaps, is more ample in Europe than in our own country; besides, preliminary education is more thorough. But a grave question arises here, and one not to be contemptuously set aside; in the profession at large where do we find the best practitioners of medicine and surgery? From our own observation, and from the testimony of eminent professional gentlemen who have spent much time in foreign countries, we have come deliberately to the conclusion that American physicians and surgeons are, on the whole, *better practitioners than their brethren across the Atlantic.* They are more energetic, have more self-reliance, and treat their patients more successfully, because their treatment is based upon the great principles of medical science, wrought out frequently alone, book in hand, by the bedside of their own patients, under the influence of the highest possible stimuli. It is thought by many, that because American pupilage embraces but three years and European five years, our graduates are not as thoroughly qualified as theirs. If any one feels curious to know the facts respecting regulations of this kind and the rigidness of European exactions, let them read the following, from the pen of Prof. C. A. Lee, than whom there is not a higher authority:

"Now, while all our schools require at least three years' study under a private instructor, in many European universities no rule, as to private pupilage, exists. The candidate is required to have attended certain courses of lectures a prescribed number of times.—

After this, he may subject himself to an examination, and if found competent, he receives a diploma. The same rule prevails at the Royal College of Surgeons; although the Society of Apothecaries of London, demand that the student shall have served an apprenticeship with an apothecary for five years, as well as have attended a certain number of courses of medicine before examination. Besides making pills and compounding medicines, *the apprentice is expected to perform the duties of hostler, and any other menial duties which the 'master' may choose to prescribe;* and Dr. Dunglison says that a *'youth of ordinary abilities is capable of attaining every thing taught him, in this long apprenticeship, in a single year, well spent.'* —(Med. Student, p. 59.) We profess to have some knowledge of the state of medical education abroad, and we fully agree with the author of last year's Report, 'that our own physicians, graduates of almost any of our medical colleges, are fully equal, and in many respects far superior, to the general practitioners of England.'"

Is the reader satisfied as to the practical qualifications of the members of our profession, with the testimony before him? If not, we know not what will satisfy him, unless it be to go abroad and observe for himself.

Finally, we ask the attention of our readers to one thing more. We would not trespass further, but that we expect, as we hope and trust, this little work will fall into the hands of ten thousands of our brethren. Many will inquire, who is Dr. Wm. Maxwell Wood, the author of this work? He is said to be a surgeon of the U. S. Navy, and author of "Sketches of South America," "Polynesia," etc. Although he occupies an honorable position, this is not sufficient to authenticate his statements. Do not be alarmed, dear friends, for Dr. Wood's authenticity; he is well backed. Look into our collection of advertisements, and you will there find the names of Professors Austin Flint, Frank H. Hamilton, Chas. A. Lee, and Geo. Hadley, who tell us that "it is a sound, well written essay, setting forth the truth clearly and plainly, addressing itself to reason and common sense. More particularly do we recommend, that members of the Profession purchase the same in quantities for distribution in the communities where they severally reside, as in our opinion, the cogent arguments therein advanced will go far towards counteracting the influence and staying the progress of Quackery in all its forms."

After pointing out the outrages which the author of this essay has inflicted upon the profession generally, and upon medical colleges,

their graduates and students in particular, and after showing that his statements respecting the comparative length of life in Europe and America, were violations of truth, we need not say that we were astonished to find these distinguished names in this connexion! Are Professors Flint, Hamilton, Lee and Hadley prepared to defend the assertion, that "medical colleges are but shops for the sale of diplomas," and that "the granting of them is a mere trade?" Do they believe that the graduates sent out from these colleges are mostly "too sickly, too lazy, or perhaps too stupid, to learn any mechanical pursuit?" Is it a fact, gentlemen, that "the average length of life in America is little, if at all, more than half that enjoyed in overcrowded, overworked, vicious, half-starved Europe?" and that this early mortality is due to inexcusable ignorance and mal-practice? If you fully believe these statements, you are consistent in the endorsement you have given to this extraordinary essay. But unless you make your own college an exception to the rule, and prove that it, alone, is not obnoxious to these imputations, we have only to infer and lament the deplorable condition of your Institution, whose reputation you have done so much to build up and sustain.

We are of the opinion that, if generally read by the people, those portions of the essay to which we take exceptions, will do more to abase and undermine their esteem and respect for the medical profession, than all that Quackery, and the vile, unmasked contemners of our noble calling, can do in half a century. If we do not respect ourselves, who will respect us? If our champions denounce the regular practitioners of medicine and surgery as *ignoramuses*, *knaves* and *fools*, what can the world do but despise us?

We hope, now, that the essay of Dr. Wood will be purchased and read. Possibly we have done the author injustice; if so, we are prepared to make the *amende honorable*. There is much in it that is both beautiful and true, and worth the reading; but that which is untrue, unjust to the profession and cruel, let us, to a man, discountenance and denounce.

"The Physician's Visiting List, Diary, and Book of Engagements, for 1852."—We desire especially to direct the attention of our readers to a little book gotten up by Lindsay & Blakiston, which is one of the most convenient things of the kind we have ever seen. It is intended exclusively for the use of physicians, and must prove of great value. Although small, a mere pocket book, and in

all its parts easily comprehended, it is not easily described. To give something of an idea of its character, we will present the table of contents, which are: "1. An Almanac; 2. Explanations; 3. Preface; 4. Table of Doses; 5. Poisons and their Antidotes; 6. Code of Medical Ethics; 7. Meeting of the National M. Association;" and then we have blank leaves variously and ingeniously ruled, for "Visiting List, Memoranda, &c., &c.; Addresses of patients and others; Accounts asked for; Memoranda of wants; for Obstetric Engagements; Vaccination Engagements; List of things lent to patients; Books, Instruments, &c., &c." We have always felt the need of just such a little memorandum. The author says truly, that "with it in his pocket the practitioner has always by him his list of patients, his professional engagements, and his day-book, as well as a diary or memoranda." We have no doubt if physicians knew the cheapness and value of these books, they would "go off like hot cakes." We were anxious to have "New-Years" come, that we might begin to use this little companion.

New York Medical Times—J. G. Adams, M. D., *Editor and Proprietor.*—We have just received No. 3 of Vol. 1 of a Medical Journal, published in New York, with the above title. It looks very well, and really contains some excellent articles from the pens of able writers. It takes the place of the New York Register, now defunct, and is published monthly at two dollars a year, which is cheap enough, but not so cheap as ours for the amount of matter it contains. We shall be happy to exchange, but the editor will have the goodness to send us the back numbers.

A Good Idea.—A subscriber writes us, if we will say to our patrons editorially, "*put your money in the mail regularly addressed, post paid, and we will run the risk,*" he will send on the *rhino.* Now if all our patrons would treat us in this way we would say it over a hundred times. We take the liberty to say now to all those indebted to our Journal, that we will run the risk of funds sent to us by mail. Of course we will, as under this good Whig administration there is no doubt about the honesty of Postmasters!! Gentlemen, you who are indebted to us, will you have the kindness to send us the amount due us, as we are not able to pay the publisher for the work he performs for your benefit. We know we are not unreasonable in this request.

EDITORIAL CORRESPONDENCE.

Case of Extensive and Unusual Injury.—The following is an extract from a private letter, which we take the liberty to publish without the author's consent. The case described being unusual, singularly severe, and followed by recovery, we are confident it will form an item of interest to the profession:

"There is a case which fell into my hands since my return here, and for which I must claim your indulgence a little longer, although I fear I weary you. It is a case of rather unusual occurrence, and this of itself, ought to palliate, in some degree, the odium attached to a mistake in diagnosis. But to the case. J. L. received a very severe injury by a thrashing machine falling on him, the weight of which is said to be from 12 to 15 cwt. The entire weight did not, however, fall on him, or else the result would have been obvious. There was an oblique fracture of the left humerus, below the insertion of the deltoid, severe laceration and contusion of right thigh from its upper third to the upper third of tibia, injury of spine across the lower dorsal and upper lumbar vertebræ. The patient was taken up in a state of profound collapse and insensibility; reaction being established by the usual means, the arms put in splints, wounds dressed, &c., complete retention of urine from the reception of the injury, which lasted some two weeks, there was no fracture or dislocation of hip joint, nor any *apparent* displacement of the bones in that region, as the case was examined by three other physicians. Matters went on for four or five weeks—the wounds seemed to heal favorably, still there was a good deal of irritation about the bladder, and inability to use the right leg. The patient, however, got up, and on placing his weight on the right leg, I discovered there were fracture and dislocation of the pelvic bones. The os ilium was fractured through the acetabulum, and a complete separation of the ilium from the sacrum, as the ilium was then pushed up and backward. Now had this fracture been detected earlier, perfect rest, &c., would have been enjoined, so that union might be favored; but such not being the case, the patient was allowed to move freely as soon as able, and this doubtless prevented union of the bones, for they were in perfect coaptation, as far as external appearance was concerned, as I had an opportunity of examining the parts every day for four or five weeks, both in the recumbent and erect posture. Now the fracture was from the first moment of the injury, but the displacement only took place on

the patient's placing his weight on *that* side, (which he could not do before, he, as well as I, supposing it was owing to the injuries to the thigh, which were very extensive and alarming.) Then taking *all* the circumstances in connection, was the fracture of the ilium easy of detection or not? I mean prior to displacement of the bone; for subsequently the matter was plain as day. Recollect there were severe and extensive laceration and contusion of the thigh or leg, injury of the spine, and a broken arm, so that to say the very least, manipulation was *very* difficult. I would like to know your opinion of the case, as I can't find anything exactly analogous in the books. Another physician and myself applied Jarvis' Adjuster to the fractured bone, and *partially* reduced it, not venturing an entire reduction, as this would have involved some of the soft parts between the broken edges of the bones, and produced serious consequences. The bone was secured by a broad bandage round the pelvis several turns, then over the projecting edge of the ilium, and under the perineum, changing every few days, and enjoining strict rest. The case is now nearly well, or so that the patient can walk by the aid of crutches; there is some shortening, say one-half to three-fourths of an inch; but this can't be helped. The patient thinks I snatched him from the grave. Please reply as early as convenient, and much oblige your friend and pupil, JOHN INGRAM.

Answer.—We have no hesitation in saying that the fracture of the ilium without displacement, would be detected under any circumstances, with the greatest difficulty. Being a rare injury, the attention of the physician would not be likely to be directed to it, particularly when other fractures, extensive lacerations and contusions existed, as in the case described. Our only surprise is, that the patient should recover at all, after the infliction of such an extensive and overwhelming injury.

Transposed Viscera.—Below we give an extract from a private letter, written by Dr. Wm. Blackstone, of Athens, Ohio, to his private pupil, now a member of Starling Medical College Class. He describes, with no reference to publication, a subject in which was discovered a transposition of the viscera. Those who are acquainted with the professional eminence and high character of Dr. Blackstone, will need no assurances from us respecting the correctness of his sion, a most complete and beautiful dried preparation, wherein there statements. We might say here, that we have in our own posses is a precisely similar transposition of the viscera. The preparation

was made several years since by our excellent friend, Dr. Carey E. Trimble, of Chillicothe, O., and was kindly placed in our keeping by himself. The preparation was noticed and described by us in the first volume of this Journal.

The Dr. remarks: "The peculiarities that I have reference to, so far as yet examined, are found in the position of the abdominal viscera. The liver is on the left side, spleen on the right, splenic end of the stomach on the right, the position of the colon is also reversed, the head occupying the left side, of course the sigmoid flexure the right. These viscera were all of natural size and appearance, and occupied their quarters in a very graceful manner. If such positions are not common, and I presume they are not, and Starling wishes a *left-handed liver*, she can have one by letting her wish be known to me. We had gone too far with our work before we discovered Dame Nature's mistake, to make a connected preparation of the viscera that would have made a good appearance. Another peculiarity has been noticed—the great pectoral muscles on each side send a small tendon *over* the arm to unite with the broadest of the back, this tendon unites with the upper and inner fourth of the muscle, (pect. maj.) Other and equally strange conformations may be discovered; if so I will let you know it.

Letter from Dr. Boerstler — Clinical Remarks on Hydrencephalus, with Cases.

Prof. Howard—My Dear Doctor: In retrospecting my professional career, I find amongst many others, one fault which pervaded my practice, till clinical observations accumulated, through a pretty long series of years, and carefully noted and compared, enabled me to correct this error. Although I was convinced of the existence of many faults in all nosological systems, yet the facilities these afforded in classifying diseases, strongly commended themselves to my judgment, and doubtless contributed much in producing that train of thought which looked upon *inflammation*, if not the cause of, an almost inseparable attendant on fever. Much intercourse with my professional brethren, has convinced me that this error is one of the commonest in practice at the present day. The *primary phenomena of fever* are overlooked, and the *consecutive involvement of inflammation*, (which very often occurs,) is placed first in the series, and all the artillery of our art (not science, for there are those who practice it as an art alone) are directed to its extinguishment. In avoiding

Scylla, we must keep clear of Charybdis; and like the skillful mariner, who steers his ship securely through shoals and rocks, we, as skillful physicians, must conduct our patients successfully through all dangers, into the haven of safety. Increased action of the heart, accompanied with elevated animal temperature, are the pathognomonics of fever; and that this condition can, and does often obtain, without the presence of inflammation, will, I think, not be questioned by any sound pathologist. Yet there is a form of *fever* where the encephalon is involved, which is often but too unhappily treated as inflammatory in its character, and where copious and oft-repeated abstractions of blood are made, to the destruction of the patient. I fully appreciate the difficulties which environ the diagnosis between some inflammatory diseases of the encephalon, and those which are non-inflammatory; but yet hope to contribute a few facts elucidative of this subject. These facts are derived from a long course of clinical observation, and are corroborated by pathological anatomy, the true ground work so essential to all correct diagnosis.

Case 1. The son of Mr. P., aged 16 months, healthy and robust, was seized in the night with a slight chill, followed with vomiting, which continued till 11 o'clock next day, when I saw the little sufferer. As no fever was present, a mild aperient course was adopted for the correction of acidity, which was evidenced by the breath. At 3 P. M. I was suddenly summoned, and found the child convulsed. A warm bath was resorted to, but as the convulsions recurred frequently, and squinting of both eyes, I decided on the abstraction of blood, from fear of inflammation of the brain, although the face was pallid. The jugular vein was opened, and three full ounces of blood taken. By morning the boy's left side was paralyzed, and at 11 next night he died. No increased heat was present till a few hours before death; the pulse was throughout oppressed. The post mortem examination gave no traces of disease in the thorax or abdomen; the meninges, as also the brain, were natural, the veins were turgid with blood, the arteries empty, the *lateral ventricles were greatly distended with serum.*

Case 2. In the morning I visited a little girl of Mr. E., aged 12 months, who had vomited several times during the night. As this child was delicate, and often suffered from gastric disturbances, I endeavored to quiet the mother's fears, by the assurance that a little mild medicine would soon set matters right; however, in a few hours I was summoned to my patient, and found her convulsed, with a decided squint of the right eye inwards, and both pupils contracted to a

small point, the head was thrown backwards, and incessantly rotated from side to side. The warm bath, frictions and revulsions not preventing the recurrence of the spasms, I applied eight leeches to the temples; the bites bled freely; the flagging of the pulse, and increased coldness of surface, satisfied me that the case was lost, which 4 o'clock of the afternoon verified. Throughout, the face was pallid, and the temperature of the body below the natural standard—the head being somewhat hot. An examination was made at 9 o'clock that evening, and the only evidence of disease revealed in the three great cavities, was *extensive effusion of serum in the lateral ventricles.*

Case 3. I visited the son of Mr. N., a spare, sprightly boy, 8 years old, whose general health was good. I found him suffering from an intense and deeply seated head ache; his face was pallid, though sometimes momentarily flushed; the temperature very slightly elevated; the tongue foul, and breath offensive; the pulse slow, but of good force. I abstracted 8 ounces of blood, and gave a brisk cathartic, and ordered repose and absolute diet; in 12 hours he was convulsed, which left his right side paralyzed, and an inward squint of the left eye. The temperature of the head being still slightly above natural, I applied six leeches to the temples, and cold to the head, with a repetition of a cathartic. This boy gradually became comatose, or rather lethargic, and died in 80 hours. On examining the head, the meninges and brain were healthy, the *lateral and third ventricles were greatly distended with serum.*

Case 4. On visiting a little girl aged 12 months, I was informed that the child (an only one) had vomited six or eight times during the night, and frequently screamed, throwing its hand to the head, which was rolled from side to side. While examining the pulse, which was slow and oppressed; the face pallid, and the temperature below health; the child screamed, and a terrible convulsion followed, and continued for two hours, leaving the child lethargic, with a perceptible squint of both eyes inward. A little magnesia was given, and five drops nit. ether, with ten of comp. sp. lavend., every two hours. In the following 24 hours two more convulsions occurred; each time a warm mustard and salt bath was given, and the nitre and lavender, with a drop of tinct. opii, continued; in 48 hours slight reaction came on. The pallor of the face continuing, I ordered camphorated julep with quinine; under this treatment the child recovered.

Case 5. A little girl, stout and healthy, was visited by a medical friend, who found her suffering from deep seated headache — no

fever. He prescribed full cathartics and diaphoretics. A week after, I saw the child, and was informed that she had nightly paroxysms of fever, with rending headache; her face was pallid, both eyes squinting, and the pupils dilated to the greatest possible extent. Upon testing her vision, I found her totally incapable of distinguishing a pitcher from a spoon, or a dining plate from a table fork; larger objects, as persons, she could distinguish. She spoke with unusual rapidity, and manifested great irritability of temper; she remained in this state several weeks, with nightly fever, and intense headache. The bowels were kept free; external dermatives and internal stimulants, as quinine and infusion of cinchona serpentaria, &c., were continued, with generous diet. Under this treatment, regularly persisted in, I had the happiness of witnessing the patient's restoration to health and perfect vision.

Case 6. Miss C., aged 20, enjoying tolerable health, though suffering from dysmenorrhœa, whilst engaged in her domestic concerns, was suddenly seized with a violent convulsion, from which she soon recovered, and no medical aid was called for; two weeks after this, whilst in the midst of a throng of persons, she had a second convulsion. A medical friend saw her, and pronounced it an epileptic seizure; from the fullness of the pulse, the flushed face, and lethargic state of mind two hours after the fit, he abstracted blood freely, and gave a decided cathartic. Four days after this, I was desired to see her; she was free from fever, her face pallid, though occasionally momentarily flushed; pulse 60, soft and compressible; temperature of the head elevated; the body and extremities preternaturally cool; she complained of a deep seated headache, which was very intense in paroxysms. The foulness of the tongue, the excessive gastric breath, the torpor of the bowels, indicated free evacuations, which were had *sursum et deorsum*, without any alleviation of the intense headache, which was now more violent in the night. In a week she had another terrible convulsion, whilst I was fortunately at her bed side—this continued for 20 minutes, during which her face was pallid, and the temperature of the body and extremities depressed, though the head continued hot. The pulse, which just before this convulsion was 90, fell to 54; both eyes now had an inward squint, and the pupils enormously distended, and the vision so indistinct as not to distinguish persons. I prescribed the deut. iod. hydg., which in two days produced a free ptyalism, without any diminution of headache, or other improvement. Two more convulsions came on in the

two following weeks; no medicines could be given, on account of the very great sloughing of the fauces from the mercurial impress. As soon as she could swallow, I gave infusion of bark and turpentine with London porter, and generous diet. This course was continued for four weeks, and her improvement was gradual, and she now enjoys excellent health, with entire restoration of vision, and all disappearance of squint.

Remarks.—In cases **1, 2** and **3, I** committed the fatal error of abstracting blood, under the conviction, derived from the highest authorities, that such cases were inflammatory in their character. The post mortem examinations revealed no inflammatory action. They were, in my judgment, cases of venous congestion, and the effusion was thrown out by the capillaries, as we see in cases where the venous flow is arrested by ligature. In case 3, I believe the gastric disturbance was the *fons et origo*, and irritation was set up in the brain, and resulted in venous congestion. Cases **4** and **5** were cases of venous congestion. Profiting by the appearance in the former cases, I treated them on sound pathological principles; depletion in these, would have resulted as in the former. Case **6 I** hold to belong to the same category, but complicated with disturbance in the gastric and uterine functions. The pallor of face, and depressed temperature are, in my judgment, strong diagnostic marks between inflammatory and non-inflammatory encephalic diseases.

G. W. BOERSTLER.

Lancaster, Dec. 20, 1851.

Abscess containing gas.—The following history of a singular case is extracted from a letter from an esteemed friend in a distant State. It is worthy of a place upon the pages of our Journal:

Roseville, Ark., Nov. 7th, 1851.

I apprehend nothing new will be gleaned from the history of the following case. It may be interesting, as it is connected with some surgical questions of great importance. I was consulted about the 10th of October, at my office, by a gentleman who at that time complained of throbbing pain in the left lumbar region. There was much tenderness over the seat of the pain, but no swelling. He was unable to bring his left foot to the ground, when in an upright position, from the pain it occasioned in the groin and along the psoas muscle. His tongue was slightly coated with a brown fur; pulse 90; urine highly colored. I considered the symptoms were those

of acute psoas inflammation—prescribed for that disease. And accordingly I enjoined rest and the usual antiphlogistic course, with a blister to the region of pain, followed with tartarized ant. ointment. In two weeks I was sent for, and found the patient feeble, with considerable fever, and all the symptoms aggravated, my attempts to secure resolution having failed. Upon examination, the left lumbar region was perceptibly swollen, and fluctuation could be detected. The patient was anxious that something should be done, as his sufferings were severe. I proceeded to open what I considered to be an acute lumbar abscess; the patient in a sitting position. I introduced a bistoury, 4 inches from the spine, to the depth of one inch, when sanious pus began to flow, and continued until three pints were discharged. The patient being faint, I concluded to stop the discharge, and in accordance with established practice, if possible, to heal the wound by the first intention. What is worthy of remark, is the presence of a considerable quantity of gas in the cavity, which, upon pressure, would bubble out. The pus was excessively fœtid, its odor being that of sulphureted hydrogen. I closed the wound with adhesive plaster and bandage. The constitution had suffered much; I therefore prescribed tonics, with alteratives, and an opiate at night. The symptoms were not materially altered (except that the patient, being free from pain, had slept, and did not exhibit that anxious appearance consequent upon pain and vigils) at the end of 48 hours, when I removed the dressings, upon which, a greenish yellow pus, with gas, spouted forth. Half a gallon was discharged at this time, of the same character as at first, except that there was no blood mixed with it. After this I opened it once in 48 hours, by introducing a canula, with the opposite end under water, in order to prevent the admission of atmospheric air. The character of the pus improved, and its quantity gradually grew less, until, at the end of 20 days, it ceased, and my patient now seems free from disease.

The prominent circumstance in the case seems to me to be the existence of air in the cavity; and the questions at once present themselves, How did it gain admission? What are its effects? &c. In answer to the first, it may be said that there are at least four ways to account for it: 1st, by an external opening; 2d, by a communication with the intestinal canal or lungs; 3d, by spontaneous decomposition; 4th, endosmosis. The abscess was in immediate proximity with the descending colon.

The admission of air is regarded by standard authority as a very

serious accident in the treatment of large abscesses. But, from the history of this case, am I not warranted in the conclusion that air may exist in the cavity of an abscess without retarding, in any appreciable degree, the cure? M. ADAMS.

Sinapisms to the Mammæ for Suppression of the Menses.

Ed. O. M. Journal—*Sir:* With the view of calling the profession to a more close observation of the sympathies existing between distant organs, I will briefly state a case which recently came under my notice and treatment.

A young woman, 17 or 18 years of age, had begun to suffer seriously from catamenial suppression; and after the use of the ordinary means without success, my last, and successful prescription, was a repetition of the pediluvium, and sinapisms to the mammæ. The effect followed almost with telegraphic celerity, the flow following immediately upon the first impression made by the sinapisms, and quite to the astonishment of the mother; and when I intimated to her that I would communicate the case to a medical journal, she said she had been thinking herself that it *ought* to be done.

Now whether it was the sinapisms alone that produced the effect, or whether it was in part produced by previous treatment, must remain in doubt; but *I* cannot entertain a doubt, that the sinapisms were a very strong auxiliary, if not the prime cause, of so decided an effect.

I have now given the facts of the case, upon which might be based a long dissertation on sympathies, &c.; but it would be disrespectful, if not an insult to the profession, to lecture them upon the physiological sympathies existing between the mammæ and uterus. But I am not so certain but there is a great deal yet to be learned of the pathological, and, if such an expression may be used, therapeutical sympathies of those parts.

As all useful knowledge comes by observation and experience, so *this* matter must be tested. And as your Journal is designed to embody the observations and experience of the profession, (and thereby make the knowledge of all available to each,) I would *insist* that members be more ready to communicate facts, &c., falling under their own observation.

Yours, most respectfully,

O. J. PHELPS, M.D.

Piketon, O., Nov. 11th, 1851.

Occlusion of the Os Tincæ in a case of Labor, and successful Delivery by Incision—Also, a case of removal of sixty-five Tumors in one Operation.

[Reported, in a letter to Prof. Hamilton, by W. H. REYNALE, M.D., of Dansville.]

Three weeks ago I was sent for to visit a lady, Mrs. Goodrich of this place, in labor with her first child, of twenty-four hours' duration. When I arrived the pains were hard, frequent and pressing down. Upon examination, I could find no os uteri. I waited four hours, in hopes time might develop one, and made several minute examinations during that period of time, but each examination satisfied me there was no os nor cervix uteri. Everything was perfectly smooth where the natural opening ought to have been, and I could feel the child's head distinctly pressing down upon the soft parts. I now told the husband and ladies present the situation of the patient, and requested another physician to be called in. Dr. Hovey was sent for; and subsequently Dr. Cook saw her—*all agreed* that the os and cervix uteri were wanting, and that there was no natural opening for the child to pass through. Before Dr. Cook saw the patient, Dr. Hovey and myself made use of two vaginal speculums—one of gutta percha, and the other of German silver—both excellent instruments. We saw distinctly every part of the vagina—examined minutely the back, sides and upper part, and where the os uteri naturally ought to have been, here we examined with a probe introduced through the speculum, but nothing in the shape of the smallest opening could be found. Of course nothing could be done but to cut and make an artificial opening; this was done nine hours after I first saw the patient. I wound a spear-pointed bistoury within half an inch of its point, and by carrying it between my index and my middle fingers, made an incision of about two inches in length at the exact spot where I supposed the os uteri naturally ought to have been; water followed the incision. The opening dilated upon the contraction of the womb. The incision continued to dilate very much as the natural os would upon the contraction of the womb, and at the expiration of two and a half hours she was safely delivered of a healthy female child weighing nine and a half pounds. The patient has recovered without one bad symptom.

Fourteen months ago, I was desired to see a son of Mr. ——— Murray, ten years of age, of Ossian, Allegany county, eight miles

from this place. I found the boy small of stature, very pale, with a large tumor on the left side of the neck. He looked like a child with two heads, only the tumor was the largest. It occupied the whole space from the root of the ear to the acromion process of the scapula; filled up everything from the spinous processes of the cervical vertebra to the clavicle, run from the ear along the lower side of the cheek and jaw bone, to beyond the trachea on the opposite side of the neck; so that in fact it filled up and occupied a little more than the entire space on the left side of the neck, and threw the head on the opposite shoulder. I removed the entire mass, with the assistance of Doctors Endress and Patchin; we took out sixty-five distinct tumors, attached together by a cellular substance, from the size of a goose egg and larger, down to that of a marrowfat pea; they were of a fatty substance, I think. They filled a half gallon jar after their removal. The patient recovered so as to enjoy tolerably good health for eight months, when a number of small tubercles began to form around the margin of the old extirpated tumor—most were on the shoulder, some near the ear, and a few near the clavicle and spine; all were on the circumference, and none on the cicatrix. He soon after this began to complain of a pain in his left side, just below and beneath the false ribs. His father fetched him to my house; upon an examination I found a tumor of a large size under and coming out from beneath the ribs, and quite painful to the touch. I told the father I could do nothing for his son, the disease was of a malignant nature, and that he would die. He lived twelve months from the time of the operation, and died. His father sent me word at the time of his death, according to agreement; but in consequence of my being from home at the time, I did not get the information, and no post mortem examination was made, which I much regretted.

We kept our little patient fully under the influence of chloroform during the whole of the operation, which lasted nearly two hours, but full one half of the time we desisted from cutting, and applied restoratives, as the patient sunk low. You may probably think we used the chloroform too long; but we weighed the chances of the patient in our own minds, for and against the influence of chloroform on his nervous system, before the operation. We believed he would sink under the influence of the operation without the use of the chloroform, and that he could but die with its use. We decided, after mature consultation, to use the chloroform—it did, upon the whole, well—the patient had no knowledge of pain.

After the *entire mass, externally, was removed*, we discovered that a tumor of the size of a black walnut, was lying under the clavicle; this we removed without much difficulty; then another was discovered lower down, of about the same size; this I seized with two tenaculums, one in each extremity of the tumor—an assistant held them firmly and made a little pressure upwards, when, partly by dissecting, and partly with the handle of the scalpel, and partly with my fingers, I succeeded in extracting this also; but still there was another one of the same magnitude, lying yet deeper and beneath the last one—this laid below the second rib; it was also seized with two tenaculums, and firmly held by an assistant, until, partly with the handle of the knife, but mostly with my fingers, and a very little dissection with the knife when it could not possibly be avoided, I succeeded in getting *it all out*—no more could be felt. It is unnecessary to describe the situation of the patient, from day to day, during his convalescence; for the first few days he vacillated between hope and fear, but the powers of nature came to our assistance, and the patient recovered so far as to enjoy tolerably good health for eight months; ate and slept well, the countenance improved, and he looked better than he had for two years before the operation. The head resumed its natural position, and the rotary motion was good. The patient went to school some two or three months during this time. This enormous mass was only two years in growing; when it was first discovered it was of the size of a filbert, or smaller, and situated directly at the root of the ear. Mr. Murray says many applications were used to discuss the tumor, but they all (he thinks) hastened its growth.—*Buffalo Medical Journal.*

Physic and Nature in a Drug Shop.—The fondness for greasing the head and body to regenerate the hair and to cure rheumatism, and the facilities for gratifying the passion, received an amusing illustration by a druggist's boy we used to know in years agone. Observing during our attendance upon his employer, that he advertised on a huge label at the door, SKUNK'S GREASE, RATTLE SNAKE'S GREASE, BEAR'S GREASE, &c., we desired him one day to show us the articles. With great gravity he went down cellar and brought up a single small gallipot and three phials of abominable and indescribable odor. Asking him to point out the respective articles, he assured us with much gravity, looking out of twinkling gray eyes beneath a villainous brow over a pair of huge

green spectacles, on the extreme end of a long hooked nose, that they "were all contained in that pot, only receiving flavor from the bottle, the same being kept down cellar to preserve the invaluable articles in prime order." "It was decidedly the most profitable article in the shop." "The skunk's grease and rattlesnake's grease for rheumatis, and the bear's grease for the hair." He had also the oil of catfish, and oil of earth-worms, in a single bottle! These he dispensed from 50 cents to $1 per ounce, and assured us he considered it a great blessing for a druggist "to know natur." He was decidedly pious, and considered a shining light in the neighborhood. By way of illustration of the importance of his knowledge of "natur," we take occasion to tell our readers, his oil of earth-worms was much praised by a reverend gentleman in the neighborhood for its great virtue in sprains.—*Scalpel.*

Spontaneous Collapse of the Antrum.

We find the following in Ranking's Abstract:

"This rare case occurred in the person of a robust female, aged 25. Her appearance was remarkable; there was a deep purple depression between the side of the nose and the malar bone on the left side, looking precisely as if a portion of the maxillary bone had been removed. The depression was bounded above by the inferior margin of the orbit which partook of the depression, inferiorly by the alveolar process and malar bone, and in the centre by the nose. The distance from the bridge of the nose to the bottom of the depression was an inch and four-tenths.

"Until seven years previously her face had been symmetrical; but about that time she perceived a dusky mark beneath the left eye, unattended with pain. This mark gradually extended, and some flattening of the cheek became perceptible; this gradually increased until the face assumed its present appearance. A week ago some stillicidium lachrymarum ensued.

"Her teeth were *in situ*, but greatly decayed, and the gums were in an unhealthy state, but the alveolar process was sound.

"Mr. Cooper has failed to find any account of this singular affection in the records of surgery, the only approach to a reference to it being in Otto's 'Compendium of Pathological Anatomy.' Nothing is suggested to remedy it by Mr. Cooper or Mr. Ferguson, who saw the case."

Subnitrate of Bismuth in large doses in Typhoid Fever.

BY M. ARAN.

M. Moneret had previously noticed the good effects of subnitrate of bismuth in choleriform diarrhœa, and in the diarrhœa of children. M. Aran had administered it in a case of obstinate diarrhœa following typhoid fever; its success was rapid, and in twelve days the patient was able to leave the hospital. It must be mentioned that the patient was convalescent when the subnitrate was administered, and that the completion of the cure was delayed only by this diarrhœa, which continued with much obstinacy. The case, therefore, was one of that diarrhœa which almost always accompanies typhoid fever towards its termination, and which is most frequently connected with lesion of Peyer's plates, and with an irritated state of the intestinal mucous membrane; for at this period the utility of alvine evacuations is indisputable, purgatives having the property, if not of abridging its duration, at any rate of preventing or rendering less intense the complications of other organs. But because this diarrhœa, while it continues within certain limits, does not present any special indication, at least of active interference, in the earlier stages of the typhoid fever, it does not follow that it should be disregarded when it lasts beyond its ordinary term, during recent, or not yet complete convalescence. Sometimes, indeed, after a few days of intense fever, appetite returns, fever diminishes, the tongue becomes moist, the meteorium disappears, the stomach is indolent, and yet the stools continue liquid and frequent, and the patients cannot bear the slightest nourishment. In this state amylaceous lavements containing a few drops of laudanum are ordinarily employed, but often without success. The physician is thus puzzled to raise the strength of the patient; if he allows food, he has to fear enteritis; if he leaves his patient to absolute diet, his strength, instead of increasing, diminishes daily; he should then have recourse to subnitrate of bismuth as a powerful auxiliary.—*Bulletin General de Therapeutique.*

Spiritual Rappings.—As this subject has excited no little curiosity in the community generally, and sometimes even puzzled a few of the savans of our profession, it may not be inappropriate to insert the following, which purports to be a "scientific explanation" of these mysterious phenomena. The explanation conflicts somewhat with that of the Buffalo committee, to be sure, but as Dr. Dump seems,

from his natural talents, his extraordinary and peculiar acquirements, to be particularly suited to such abstruse investigations, we think his light should not be extinguished. He says:

"The only true and legitimate manner of accounting for the taps, is the physiological defects in the membranous system. The obtuseness of the abdominal abdicator, causes the cartilaginous compressor to coagulate into the diaphragm, and depresses the duodenum into the flandango. Now if the taps were caused by the vogation of the electricity from the extremities, the *tympanum* would also dissolve into spiritual sinctum, and the olfactory ossificator would ferment and become identical with the pigmentum. Now, as this is not the case, in order to produce the taps the spiritual rotundum must be elevated down to the spiritual spero. But, as I said before, the inferior ligaments must not subtend over the digitorum sufficiently to disorganize the steriecletum." DARIUS DUMP.

INDIANA HOSPITAL FOR THE INSANE.—We have received from the Superintendent, the last annual Report of this Institution, by which we learn that it contained, at the close of the last year, 137 patients —74 men and 63 women; that the whole number discharged during the year was 71; that the whole number recovered during the year was 52. Per centage of recoveries on the whole number discharged, 73.24. Recent cases discharged, 53; recent cases recovered, 42. Per cent. of recoveries on recent cases discharged, 80.77.

We are also informed that, according to the late census, Indiana contains 452 insane persons, 137 only of whom are within the walls of the Hospital, while 300 are still uncared for and unprotected. This startling fact has induced the commissioners and the Superintendent to urge the importance of extending the building, by the erection of two additional wings, costing at least 35,000 dollars. From the condition of that portion of the Insane who cannot enjoy the advantages afforded by the Hospital, as represented by the Superintendent, we do not see how the Legislature of Indiana can long delay to complete the edifice, so beautifully illustrated by a plate accompanying the Report.

That portion of the Report made by the commissioners, is clear, to the point, and highly complimentary of the Superintendent; while that of Dr. Patterson, who has charge of the Institution, though brief, is full, explicit, and shows conclusively that the Institution is well managed and in a flourishing condition. The Doctor, we believe,

has had more than the usual amount of difficulties to contend with, in the commencement and development of the enterprize. His success seems to have been triumphant. This is not surprising to us, as we know him to be industrious, absolutely indefatigable, and abundantly competent to execute the duties incumbent upon such an officer. By natural talents, and by appropriate acquirements, few gentlemen are equally well qualified to treat the insane, or to discharge, in *general*, the duties of his profession.

Surgical Splints.—We wish to call the attention of physicians to the most complete set of surgical splints we have ever seen, manufactured by F. B. Day, of Columbus. The set comprehends about forty distinct splints, which are so simple, so light, and so ingeniously constructed, as to be applicable to every variety of fracture—simple, compound and complicated—to which the human frame is liable. We have the straight splints of the French, the double-inclined planes of the English, with the most perfect improvements upon them by American surgeons, and being several sizes of each, they are applicable to persons of all ages and sizes. There are, also, splints for fracture of the lower extremity of the radius, which is, proverbially, so difficult to reduce and retain; also, for fractures about the elbow. We should be glad to say more, for higher commendation is highly deserved. When prosecutions are so frequently instituted for malpractice, nearly all of which are connected with bone surgery, physicians feel the need of every improvement to aid them in this difficult and responsible portion of their practice. We do then most fully recommend Mr. Day's splints to the consideration of the profession. They can be seen at our office, at any time, or at the manufactory of Mr. Day on Broad street, in Columbus.

Monstrosity.—Drs. J. Cohen and M. A. Durr, physicians of Jacksonville, Telfair Co., Georgia, have in their office a curious natural phenomenon, in the shape of a negro child, born upon the premises of David J. Williams of that town, which weighed twelve pounds, and had two well formed and separate heads and necks, two arms and two spinal columns, three legs with feet attached, two in their natural position and the other coming out on the back of the region of the hips, with two hearts, partially joined together, two lungs, and other anomalies.—*Boston Med. & Sur. Journal.*